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Digitized with financial assistance from

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7 2' D+!8 6' + %' "&
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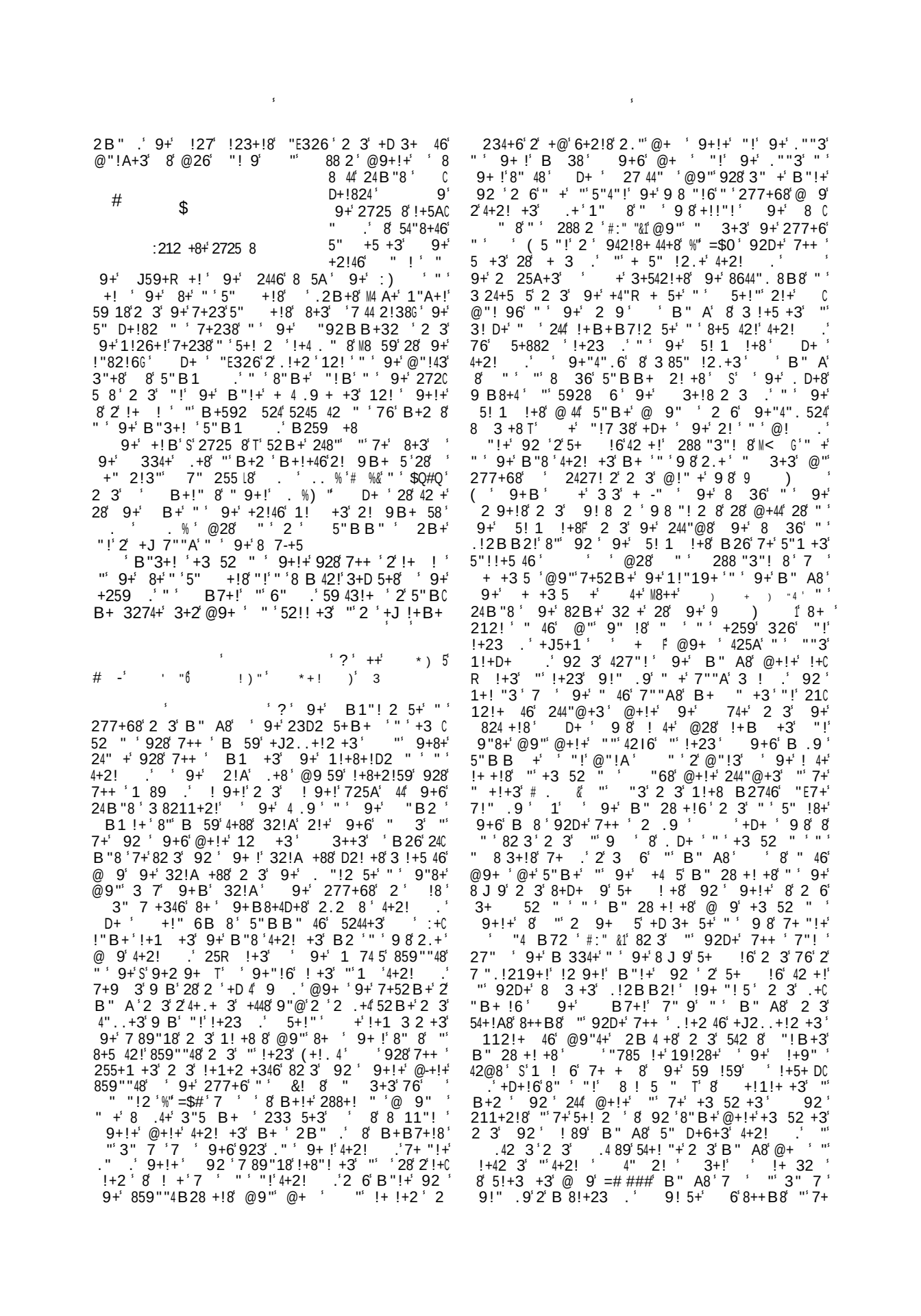
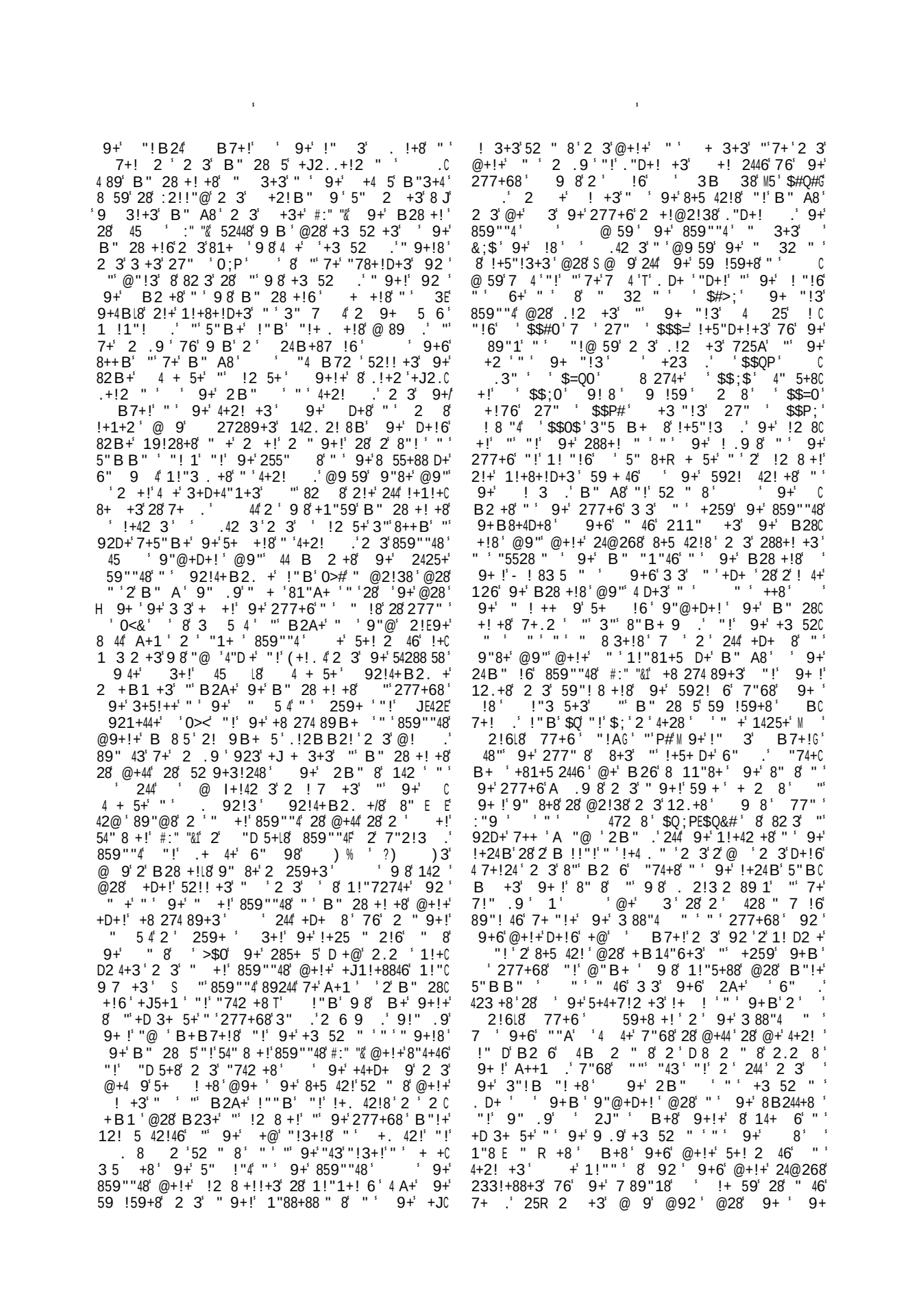
9+ B"8 ' 1!25 524 2 3 B"8 ' B B+3 2 +2 B 8 "' 7+ " ' 8+!D 5+ "' 9+ !2 A 2 3 4+ " ' 9+ +259 .' 1!" +88 " ' "' 255"B14 89 9 8 + 3 ' 9+ + !+ @"!A 8 "!.2 I+3 " ' 8 B146 28 2 7""A " ' !+ +!+ 5+ ' 7 ' 248"' 28 2 868 +B2 5 !+2 8+ " ' +259 1928+ " ' 9+ 8 7-+5 ' "' ! 9+!' 9 8 3+8 . ' +259 281+5 ' " ' 9+ 8 7-+5 ' @9 59 4+ 38 8+4 ' "' 868 +B2 5 85 + 5 !+2 B+ ' 8 3+!' 9+ 592!.+ " ' 2 3+12! B+ 24 "!' 288"5 2 +' +3 "!' @9"' 8 2 ' 2 9"! 6 ' 9+ 81+5 24 +43 ' 2 3 @9"' 8 !+81" 8 74+ " ' " 46 "!' 2 ' 23+R 2 +' 1!+8+ 2 " ' " ' +8 274 89+3 25 8 ' 7 ' "!' 8 59 2 868 +B2 5 "!.2 I2 " ' " ' 9+ B2 +! 24 92 ' 9+ 5"B7 +3 2! 54+8 @ 44 8+!D+ 28 2 85 + 5 !+2 8+ " ' 9+ 8 7-+5 ' "' 9 8 + 3 9+ @"!A 54 3+8 2 4". 524 " 4 +' " ' 9+ "1 58 !+2 +3 ' @ 9 12. 24 !+ +!+ 5+8 ' 9 8 59 2 2468+8 9+ @"!A @ 44 5" 8 +' 2 ' 2 9"! 2 D+ 2 3 5"B1!+9+ 8 D+ 6+ ' 5" 3+ 8+3 +J 7""A ' " B+ 9"3 " ' +3 52 " 24 18659"4".6 ' " ' 859""4 23B 8 !2 " ' " ' 859""4 96. + +' " ' 9+ 9 8 "!6 " ' 19 4"8"196 " ' +3 52 " ' + 5

2446 2 3++1+!' 1!" +88 " 24 B" D+ 928 25 2 +3 9"8+ @ "' 92D+ 5" ! 7 +3 B"8 ' "' 9+ @"!A ' " ' 8 59 2 ' "!.2 I2 " ' " ' B2 +! 248 ' 8"' 9+ +!".+ +" 8 ' 592!25 +!' ' 8 9"1+3 92 ' 8"B+ .!+2 +!' 6 B26 7+ . D+ ' "' " !' +3 52 " 24 9" .9 ' 2 3 2 .!+2 +!' "!B 6 B26 !+8 4 ' ' +3 52 " 24 1!25 5+ 9+ B+!+ 868 +B2 I2 " ' " ' +3 52 " 24 3+28 ' @ 9 2 .!+2 +!' 3+.!++ " ' "!B 6- ' 8+ " ' +!B "4".6 ' 89" 43 288 8 ' ' 6 .' +3 52 " 24 9" .9 ' 9+ 7! . .' "' 4 .9 ' " ' 3 D+!.+ ' 1!25 5+8 9+ 8 2 +B+ ' " ' 9+ !+8 4 8 " ' 9+ 7+8 ' 5" 3 5 +3 +J1+! B+ 8 9+ 8 2 +B+ ' " ' 9+"!6 3+!46 .' " !' 1!25 5+ 9+ + "! ' D"4D+3 ' 9+ 2114 52 " ' " ' 9+ 5"B12!2 D+ B+ 9"3 " ' D+8 .2 " ' 2 3 8 36 ' ? '244 9+8+ 89" 43 + 3 "' 2 "!B46 9 .9+!' 142 +' " ' +3 52 " 24 1!25 5+

0 ' ' ((< 9+ !8 ' D"4 B+ 54 3+8 27" ' 2 9" 82 3 4+ + ! +8 ' 9+ 2! 54+8 2!+ 9+ 5" ! 7 " 8 " ' B"!+ 92 ' " + 9 3!+3 81+5 24 8 8 ' 78+R + ' D"4 B+8 2!+ "@ 7+ .' 1!+12!+3 76 5" ! 7 "!8 !+1!+8+ .' 2 ' +R 2446 @ 3+ !2 .+ " ' +!+8 ' 9+ 3+12! B+ 24 +3 "!8 ' 59"8+ ' 59 + 46 !"B 9+ B+! 52 ' +43 ' !+1!+8+ ' ' +D+!6 528+ 9+ B"8 ' 2 9"! 2 D+ 2 3 82 + 81+5 24 I2 " ' ' 9+ !'!+81+5 D+ 819+!+8 "' 2 B7+!" ' 5" ! 7 "!8 9+ +3 "!' 8 "' 4+88 3+7 +3 92 ' "' 9+ 3+12! B+ 24 +3 "!8

9+ 5"B14+ +3 @"!A @ 44 7+ 9+ 5" 8 B B2 " ' " ' 142 8 ' 3+D+4"1+3 9!" .9 B2 6 6+2!8 9+ +J+5 " ' " ' 9+8+ 142 8 @ 44 7+ 3 + "' 9+ 5""1+!2 " ' " ' 9+ B+!" 8 5" ! 7 "!8 ' @9"8+ 288 8 2 5+ 928 7++ ' 28 .+ +!" 8 2 3 9+2! 6 28 9+ !' 859"42!89 1 8 @ 3+ 2 3 9"!" .9





D+! 25 42!' 28' ' 9+' 5+4+7!2 +3' 4+ +!' " ' !59C
7 89"1' +5A92B' "' 9+' 8' " ' "38 "@' 27" '
9+ !' "" ' .!+2 ' 2B 4 2! 6' @ 9' J "!3' 3+!C
.!23 2 +8 ' "!' 3++3' @+!+' 9+' 277+68' "!'
B+ '8 59' 9" 8+8' " '4+2! .' 9+R 8+4D+8' 28' "' 7+'
521274+' " ' 7+5"B .' 8"' "!' " 9+!8 ' 9+' 277+6'
859""4' 2 .9 ' 9+' + +3 5 +' ! 4+' !2 9+!' 92 '
.!2B B2!' 1 85"124' D 8 2 " 8' '244' 5+ ! +8'
! .' @ 9' 5"B142 8' " ' 9+ !' @2 ' " ' 4+2! . '
9+ ' + +3 5 ' % ' ' $; ;P' ! +3' "' B2A+' 9+'
+ +3 5 +8' 2 3' . 8 2 8' 4+2! +3 ' 9+'
"!3+!+3' 9+B' "' 1!"D 3+' 2' .!2B B2!' B28 +!'
@9" ' 5" !2!6' "' 9+' ! 4+' B .9 ' 7+' 2' 8+5 42!'
9+' 81+5 B+ 8' " ' 8 59' 211" B+ 8' 1!+8+!D+3'
2!+' 8+5 42!' +' " ' 9+' 42 +8 ' 2 ' / C
59+8 +!' @28' 9+' 89+!' "!' +5" 3' 28 +!' " '
9+' 5"44+.+' + ' / 2B' " ' 6A+92B' 923' "'
5"B142 ' " ' 9+' B" A8' " ' 9+' 52 9+3!24' " '
59+8 +!' B !3+! .' 9+' R 2 +8' '!+23 .'
9+' 4+88" 8' 2 3' 8"' 3 3' 44 2B' 2!92B' " ' 9+'
B" A8' " ' 2 +!7 !6' 2/ 5+ !6' 2 3' 2' 924'
42 +!F @9 4+' 89"1' 5A+!8' D 8 2 " 8' " ' "!C
@ 59' 2 ' 9+' + 3' " ' 9+' ++ 9' 5+ !6' 2!+' 44'
" '5"B142 8' 92 ' "' .!2B B2!' 859""4B28 +!' 8'
A+1 '2 ' 9+' B" 28 +! +8' 2 3' 92 ' 9+' B" A8' 2!+'
. "!2 ' 9+' 277" 8' 2 3' ! 2!8' 923' .+ +!2446'
7++ ' "' J "!3' "!' 2B7! 3.+' 3+!' 9+' 8 2 +'
" ' $; ;P' @9 59' !+R !+3' D+' 1+!' 5+ ' " ' 9+'
B" A8' "' .' "' 9+' D+!8 +8 ' " 9 .' 4 A+'
92 '1!"1"! " ' @+ ' ' 25 ' D+ ' 2 ' +8 C
B 8 +!' + !6' ('5"B142 +3' 2 ' 9+'+ 3' " ' 9 8'
!+ . ' 92 ' 9+' B" A8' @+!+' 8 A' ' . "!2 5+ '
2 3' .2D+' 2' +@' + 3"@B+ ' "' 8+ 3' 9!++' " '
9+B' "' 9+' D+!8 6' "1 42!' 4 +!2 !+'
!"B' 9+' @+4 9' 5+ !6' 3"@ @2!3 ' " 2746'
9+' .) ' 0 1' +8 +8' "' 9+' 3 8!+.2!3'
"!'4+2! .' ' 9+' 277+68 ' 9+' 52 8+' " '+3 52C
" '2 3' 859""48' 8 +!+3' " 9 .' 76' 9+' 3 88"4 C
" ' " ' 277+68' 76' + !6' ('+J5+1 ' ' 9"8+'
528+8' @9+!+' 9+' 859""48' 2 3' 9+ !' + 3"@B+ 8 '
"!' (9 59' 9+6' 923' 7++ ' ! 8 +8' @+!+' !+2 +3'
28' 277+6' 1!"1+! 6' 2 3' 5" 852 +3' "' 9+' !"@ '
V@ 9" ' !+ " 32 " ' ' '

' ' ' ? ' 59""4C
B2 ' 7"! ' 2 ' +@' ! 8@ 5A' + ' +1 ' ; '
$>#0F +3 52 +3' ' 1! D2 +' 859""48' 2 3' 2 '
"@3" ' "44+.+' 2 3' 3"D+!' 9+"4". 524' +BC
2!6F +259+!' ' 9+' 2523+B6' 2 ' 28 +' + '
1! 5 12' " ' 9+' 2523+B6' 2 ' B9+!8 ' 'W 288 F
8 ! 5 "!' ' 9+' ' (+! " ' 59""4' "!' !48E
3 !+5 "!' " ' "5 + 6' "!' 9+' 8 " ' " ' 8+ 4'
"@4+3.+' $>;&E$>=;F 1! 5 12' " ' 1 .4+!'
8 +' 2 +!@2!38' 77" ' "44+. 2 +' 8 C
" ' $>=;E$>0$F 2 9"!' " ' 2' 81+44 .' 7""A' 2 3'
@ 9' :"89 2' +2D ' #:" "&1" ' 2' 8+! +8' " ' 859""4'
!+23+!8F 3 +3' . ' ; ' $>0=' ' >'

' ? ' ' 859""4' "1+ +3' '
$>><' 76' !' +5 4' +33 +' @9"' @28' 1!" " 346'
B1!+88+3' 76' 9+' 4 B 2 " 8' " ' 9+' .4 89'
795' 59""48' :" "& 2 3' 3+! ""A' S' "' 1!"C
D 3+' "!' 7"68 ' 7+ @++ ' 9+' 2.+8' " ' 27" ' + '
2 3' + ++ ' 2 ' 244E!" 3' +3 52 " ' " ' 2 '
+ !+46' B"3+! ' 2 3' !2 " 24' 592!25 +!' 728+3

1" ' 9+' 1! 5 14+8' " ' +3 52 " 24' 85 + 5+' 2 3'
2321 +3' "' 9+' ++38' " ' 9+' .4 89' 5 4 !+3'
54288+8 ' @9 59' 89" 43' 3 !+5 ' 9+' 2 " 24' 4 + X'
' 8' 9 8' 211+24' "' 9+' ++38' " ' 9+' 3 !+5 .'
54288 ' ".+ 9+!' @ 9' 9+' !+5". " ' 92 ' 9+8+'
++38' 54 3+' 8"B+' 1928+8' " ' !2 .' 8 2446'
4+ ' "' 9+' 4"@+!' 54288+8 ' 92 ' 92D+' 7++ ' B"8 '
!+R + 46' " +3' 76' 5! 58 ' 2!46' ' 9+' 9 8)'
"!6' " ' 9+' 859""4' ! ' +33 +' 52B+' 3+!'
+!72! 2 ' 4 + 5+' 2 3' !+"!.2 I+3' 9 8' @"!A '
@9 59' 923' 4+2 +3' "@2!3' 2 !24' 85 + 5+' 76'
2 ' 2!!2 .+B+ ' " ' 9 B2 8 5' 8 3 +8' '
8 2.+8' .!" 1 .' @92 ' 8++B+3' "' 7+' 211!"1! C
2 +' B2 +! 24' "!'+259'6+2!' " '2.+' 2!" 3' 2' 5"!+'
"!' 5+ +!' 9 8' " +' 6+2!' @28' 1!+3"B 2 46'
. D+ ' "' !+ 59' +!+8 8' 2 3' B2 +! 248' 2 C
" 9+!' "' +!B2 ' + 5' 9+' +259+!8' !2 +3'
76' 288"5 2 " ' @ 9' ! ' +33 +' 92D+' 7++ ' 5" C
81 5 " 8' ' 9+ !' 42 +!' @"!A' "!' 1+32.". 524'
+59 R +

+@' 859""48' 92D+' 7++ ' A+1 ' 8"' 3+ +46' 2 '
9+' "5 8' " '5" 85 " 8 +88' " '2' " 3+!' ' B"8 '
+427"!2 +' 2 3' +J + 8 D+' 8+ ' " ' !+5"!38' 2 3' 19"C
".!2198' 928' 7++ ' B23+' 2 3' 1!+8+!D+3' 9+'
7""A' .. ' 5" 2 8' 2 ' +J !2"!3 2!6'
2B" ' " ' B2 +! 24' 89"@ .' 9+' 9+"! +8' " ' 9+'
2 9"!' 2 3' 255" 8' " ' @92 ' 928' 7++ ' 2 C
+B1 +3 ' 9+'7 43 .' 4"52 +3' " ' 2 ' +8 2 +' " '
" +' 9 3!+3' 2 3' 6' 25!+8' ' +!7689 !+' +2!'
"5+8 +!' 8' 2' B2!D+4' " ' 142 .' 9+' 3+ 2 48'
" ' 859""4' +' 2!+' B +46' 1!+85! 7+3' '
8++B+3' 8 . 52 ' " ' 9+' +J + ' "' @9 59' .C
4 89' !23 " 8' " ' 5"!1"!24' 1 89B+ ' 1!+D2 4'
92 ' 9 8' @28' 24B"8 ' 9+' " 46' 25 D 6' 27" '
@9 59' "' !+5"!38' @+!+' B23+' 2 3' 9+' +8 B2 +8'
" ' 9+' B7+!' " ' 528+8' 76' 9+23' 7"6' 2 3' 1!+C
+5 8' M@9"' 2!+' 1+!B +3' "' 4".' " ' 2.!++B+ ' " '
244' 9+' 1!+ +5 8' @ 9' 9+' 5" 8+ ' " ' 9+' 9+23'
B28 +!G 3 +!+3' 5" 8 3+!2746' !"B' 9"8+' " ' 9+'
B28 +!8

9+' .!23+8' " ' 8"5 + 6' 7+4"@' 9+' 1!+ +5 8' 2!+'
8 2!8' M@9"' 1+! "!B' 81+5 24' 8+!D 5+G' B 38' 2 3'
2.8' 9+!+' 2!+' @"' "!' 9!++' " ' 9+8+' 428 ' 28C
8 . +3' "' +259' 1!+ +5 ' 9+6' 2!+' 8 11"8+3'
"' 1+! "!B' 2 6' 3 +8' 288 . +3' "' 9+B ' 2 3' '
! ' 9+' 1!+ +5 ' 8' +J1+5 +3' "' 4""A' 2 +!' 9 8'
2.8' 2A+' @24A8' @ 9' 9+B ' + 5

9+' "!B24' 281+5 8' " ' !+4 . " 8' 8+!D 5+8' !+C
5+ D+' 5" 8 3+!274+' 2 + " ' 9+' +B1928 8'
9+!+' 1" ' "!B' 8++B8' "' 7+' 8 B 42!' "' 92 ' '244'
" 9+!' +438' ' 9+' 859""4F 9+' + " ' 8' 92 '
@92 +D+!' 52 ' 7+' 868 +B2 I+3' 8924' 7+' 1 ' "'
B259 +' "1+!2 " ' "!3+!' "' !++' 9+' 9 .9+!'
5+ +!8' "!' @"!A' !+R ! .' "! . 24 6' 2 3' 2C
D+ ' ! +33+8!' 2 3' ! ' 5" L8' 5! 5 8B8' " '
9 8' 2!+' 8 ..+8 D+' M8++' 7 74 ".!2196G' 9+'
+2!4 +!' +B1928 8' 1" ' 9+' 25 D +8' " ' " 3""!'
4 +' 28' 926B2A .' 8 .' 9+8+' 28' 2 ' "11"! C
6' "!' 12! 5 12 " ' '1!"3 5 D+' 427"!' 2 3' "!'
+8 D2-' 5+4+7!2 " '9/28' 7++ '8"B+@92 ' !+3 5+3 '
9+' .2!3+ ' 928' " ' 9+' @9"4+' 6 +43+3' 8"B+@92 '
"' 5! 5A+ '7 ' 9+' +J + 8 D+' !+5"!38' " ' 9+' 859""4'
+J1+! B+ 8' @ 44' @+44' !+126' 9+' 8 36' " ' 9"8+'
@9"' 2!+' 5" 5+! +3' @ 9' " +' " ' " !' B "8 ' !.+ '
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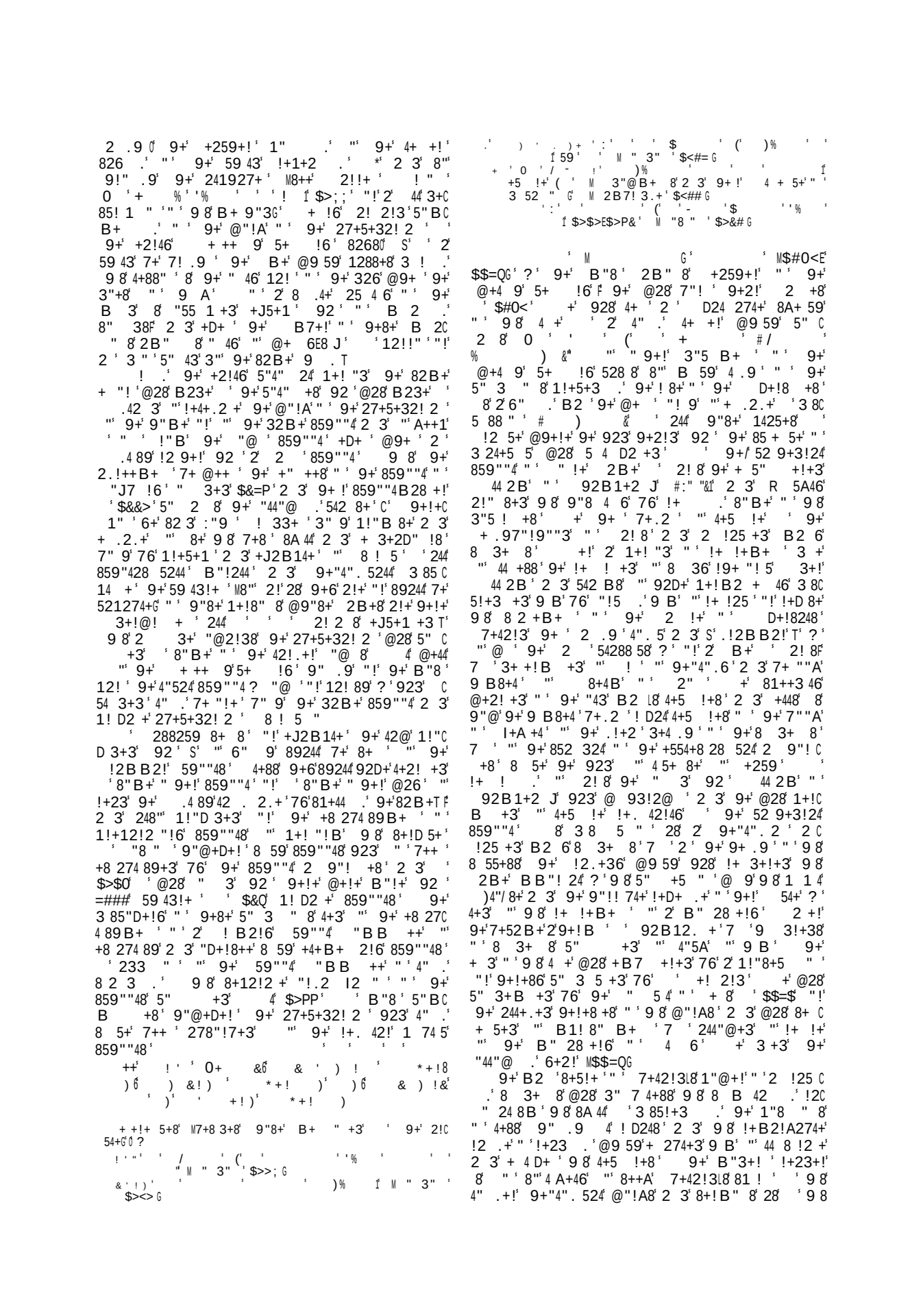
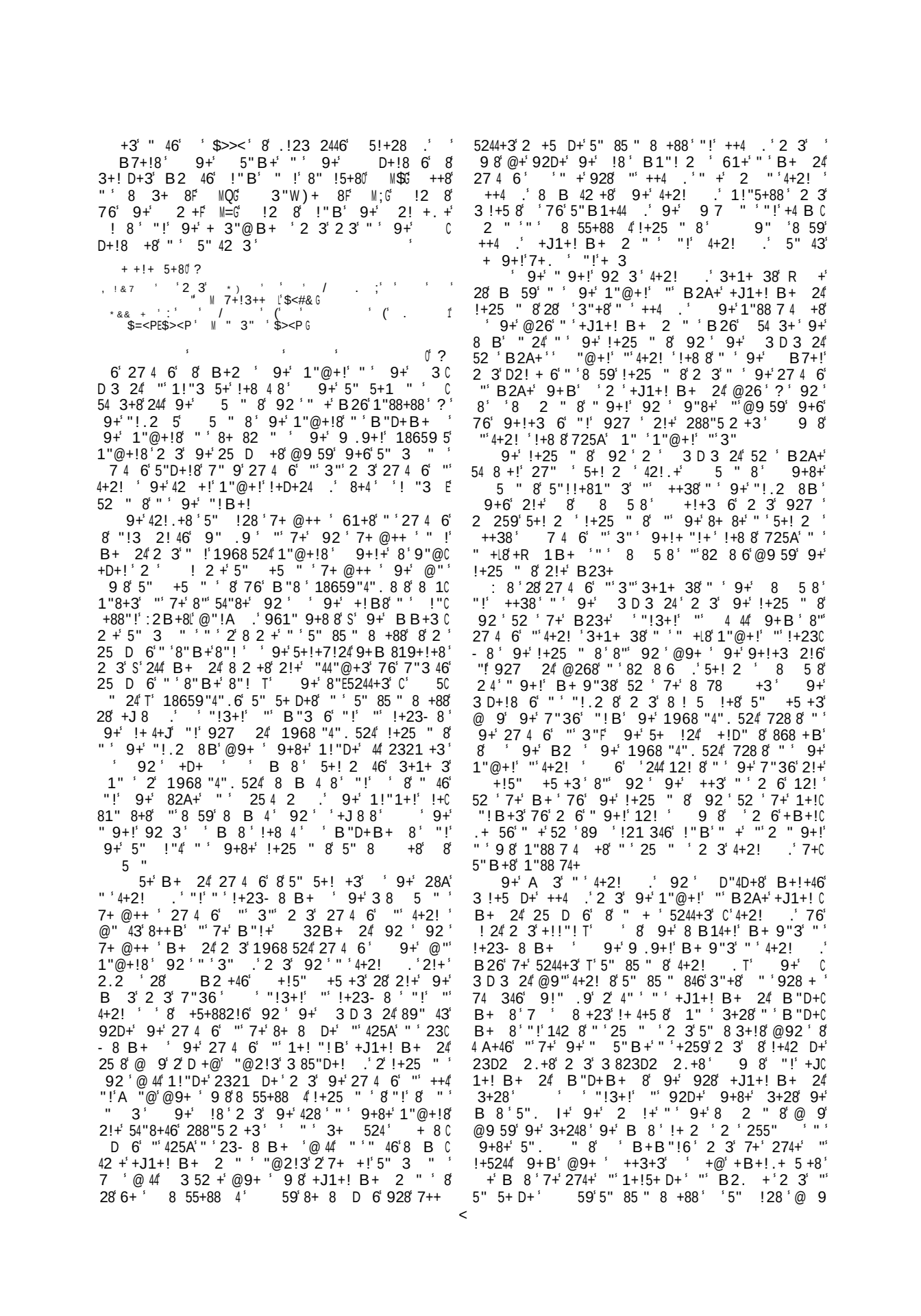




++4 .'"!'2 +5 D+'5" 85 " 8 +88'B26'7+'5244+3' 5". D+'5" 85 " 8 +88' 8'2 +5 D+'5" 85 " 8C +88' 8 B 42 +8' +J1+! B+ 2 " ' 2 3' +4 B C 2 +8' 9+' 8 55+88 4' +J1+! B+ 8'8"'5". C D+'5" 85 " 8 +88' 1!"D 3+8' 3+28' "' 2A+' 9+' 1425+'"'25 24' +J1+! B+ 8'@ 9'2'.!+2'!+8 4 C .'.2 ' '2D" 32 5+'"'3+8 ! 5 " '+ "! '2 3' ' .+ +!24' 9+' @+2!' 2 3' +2!' "' 9+' 74 3' 8 ! ..4+' "'+D"4D+'2'7+ +!'@26'"'3" .' 9 .8' +5 D+'5" 85 " 8 +88' B26' 7+' 592!25 +! !+3' 28' 8+4+5 D+'5" 85 " 8 +88F5". D+'5" 85 " 8C +88' 8'3+85! 1 D+' '3+85! 7+8' 9+'5" 3 " 8' 2 3' !+8 4 8' "'+J1+! B+ 2 "

". D+'5" 85 " 8 +88' 38' 8' " 32 " ' ' 9+'3 +!+ 'R 24 +8' 92'2!+' " +3'7+52 8+' "' 9+'3 +!+ 2 "'"'" !'1"@+!8'"'8+ 82 " ' 9+8+'R 24 +8'2!+'3 85! B 2 +3'28'2'!+8 4'"' !+5244' 2 3' 5"B12! 8 "' 76' @92' 8' A "@ '28' 1+!5+1 " ' +!5+1 " '3 85! B 2 +8'2 3'. D+8' B+2 .' "'8+ 82 " ' B2. 2 " '!+1!"3 5+8' 1+!5+1 " ' @ 9'D2! 2 " 8' B"!+'"!'4+88' !23 524' !"B' 9+'"! . 24' " 5+1 " '8+ I+8'2 3' 27C 8 !25 8' 9+' !+42 " 89 18' 2B" .' +J1+! + 5+8' 2446'- 3.B+ '211+2!8' "' . D+'2'5". D+' 728 8' "!' 9+'1!"5+88' "'8+4+5 " '2B" .' 3+28' '- 3.B+ '5". " ' + 5!"259+8' 1" ' 9+' 8+4+5 D+' 5 " ' 92'@28'"! . 2446'1+! "!B+3' 8"4+46'76' ++4 .' 9 8'244' 9+'D2! + +8' "'5".C " '52 '7+' +!1!+ +3' !"B' 9+'1" '"'D +@' "' 9+ !' 5 " ' '5" +5 " '@ 9' 9+' @"!A' "'4+2! .'"!'!+23- 8 B+

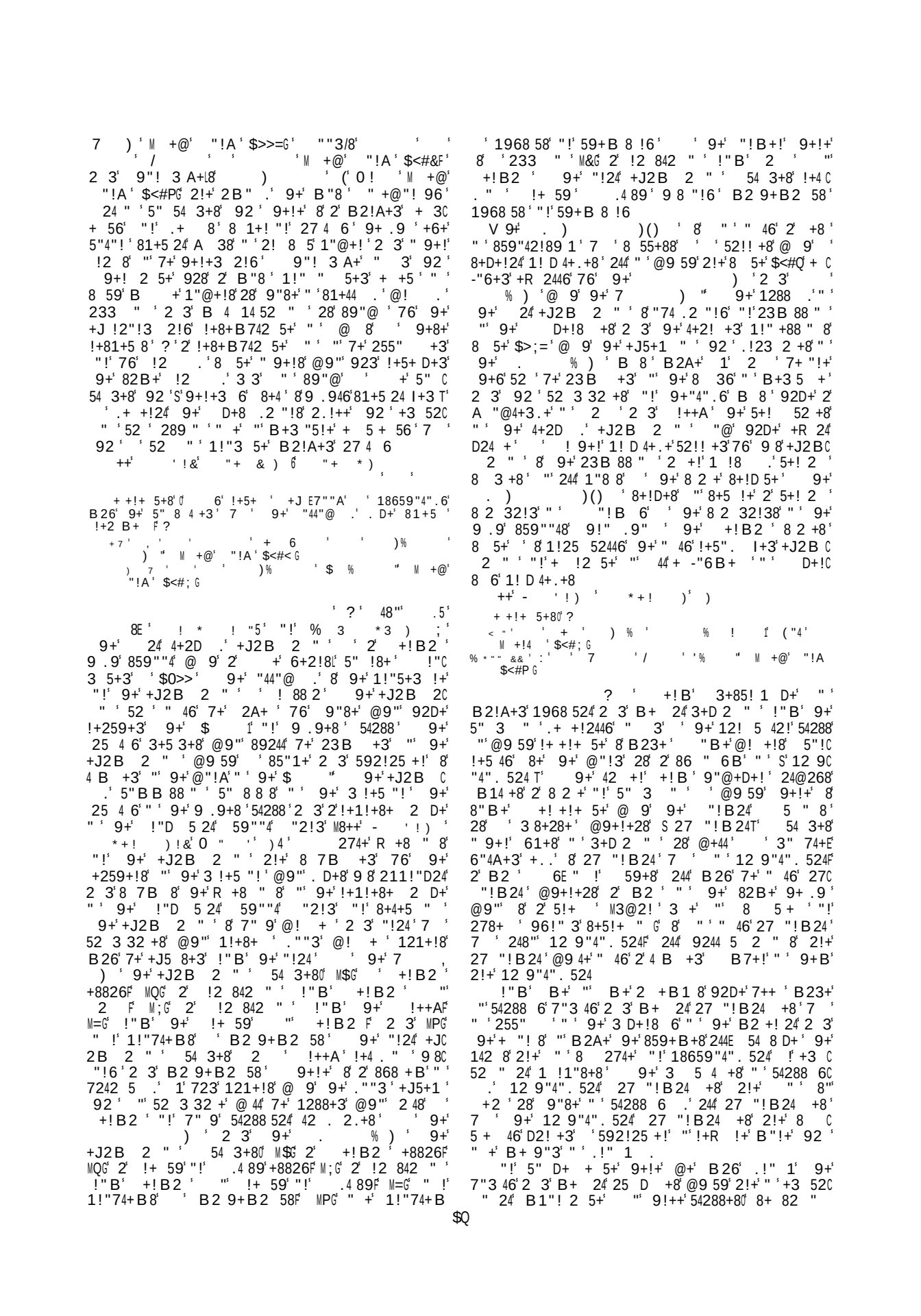
9+'1968 "4". 5)' " 32 " '" ' 9+8+'9 .9+!' B+ 24' 1"@+!8' 8' " 3' ' 9+'5+!+7!24' 5"! +J' @9 59' 8' 5" 5+ D+3' "' 7+' 9+'"!.2 '" 'B+B"!6' 2 3' 8"' " ' 9+' !+5244'5"B12! 8" '2 3' 2 2468 8' "'+J1+! + 5+' 9 8' 5 " 'B26'7+'!+.2!3+3' 28' 9+'8+5" 32!6' 5 " '" ' 9+'9+B 819+!+8' 9+'1! B2!6' 5 " '7+ .' 92'" '7! . .' "C .+ 9+!'244' 12! 8' " ' 9+'7"36'8"' 92'4+2! .'76' 2'R 5A' !+8"!' "' " +' 2 +!' 2 " 9+!' !+25 " ' 4' 2' 8 55+88 4']" +' 8' " 3' B26'7+' B23+' +286

9+'3+85! 1 " 8' " '5". " ' 3' 9+ !' 5C " ' " 'B+!+46'28'2 ' 3' "' 9+'8 55+88 4' 1!"8+C 5 " ' " ' 9+' +J1+! B+ 2 " ' ' 5" +5 " ' @ 9'@9 59' 9+6'2!+'25R !+3'7 '248"' ' !+' +B+!.+ 5 +8' @9+ ' 9+6' 2!+' !+5244+3' 3++3' 9 8' 42 +!' 8+' 8"' "D+!8923"@8' 9+' "!B+!' + "!+' 9+'59 43' 928' 25R !+3' B 59'+J1+! + 5+' 9+'4+2! 8'76' ! 24'2 3'+!!"!' 9 8'4+2! .' 8' " ' 2 ' !8 ' 2D"!+3'+81+5 2446'76'5". " ' 2 +!' 9"@+D+!' 28' +J1+! + 5+' 255 B 42 +8' 25 24' +J1+! B+ .' 8' 5 '89"! '2 3' 2 '4+ .F 9' D+!6' 5" 8 3+!2746' !+1425+3' 76' "!+8 .9 ' 9+' 25 ' 92 ' 9+'1!"5+88' "'25R ! .' 3+28' 8' "'8 59'2 ' +J + '8+12!2 +3' !"B' 92'" ' 4 I .' 9+B'928' B23+'B+ 24'4 +'8++B' "'7+' 3+1+ 3+ '" ' 9+' 4 +8' "'1968 524'23- 8 B+ ' + 24'27 4 6' 928'7++ '5" 5+ D+3' "'7+'5" 5+! +3' '2'3 +!C + '8+' " ' +!+8 8' !"B' 1968 524' 27 4 6'2 3' 9+ 5+'8"B+@92' 892!146'3 +!+ 2 +3' 9+!+C !"B

9+' + 3+ 56' "' 9 A' " 'B+ 24' 27 4 6' 28' 2' 9 .'212!' !"B' 1968 524' 27 4 6'2 3' 8"' " ' 9+' .+ +!24' 4 +8' " ' 9+'4 +' " ' 9+' 3 D 3 24' 8 2112!+ ' ' 9+'"43+!' 18659"4".6' " +5 +3' @ 9' 9 8' @28' 9+'54288 52 " ' " 'B+ 24' 27 4 C +8' 255"!3 .' "' @92' @+!+' A "@' 28' 9+' 25 4 +8' 9 8' 54288 52 " ' !+5". I+3' 92' B+ 24' 27 4 6' @28' " ' 2' 2!6'2 2!' 7 ' !2 9+!' 81+5 24 I+3' ' 5" 5+ D+3' 9+' D2! " 8' 1!"5+88+8' "' @9 59' 9+' B 3'8 7B 8' 8'+J1+! C + 5+' "' 7+'3 8 5 ' 2 3' 9+43' 92' B+ ' B .9' 3 +!' !"B' +259' " 9+!' ' !+81+5 ' "' 9+8+' "B+' +J5+4' ' 1+!5+1 " ' " 9+!8' ' B+B"!6' "!' B2. 2 " ' " 9+!8' ' !+28" .F 8"B+'8 !C 1288' ' - 3.B+ ' @9 4+' 8"B+' 89"@' +J !2"!3 C 2!6' 1"@+!8' " ' @ 44' + +!24' 27 4 6' !+3 5+8' 8+4' "' 2' 8 B' " ' 81+5 24' 27 4 +8' 2 3' 9+' 81+5 24' 27 4 +8' " ' 9+' B 3' 2!+' 9+43' "' 7+' 9+' 25 4 +8' 9+' ' 9+' 9 8 "!6' " ' 18659"4".6' 9+' 1"@+!8' " ' 9+' B 3' 52B+' "' 7+' B"!+' 2 3' B"!+' 5" +5 +3' @ 9' 9+' 7"36' 2 3' +81+5 2446' @ 9' 9+' 7!2 ' 2' 859""4' 2!"8+' @9 59' 8 !"D+' "' 4"52 +' 9+' D2! " 8' 25 4 +8' ' 3 +!+ ' 1"! " 8' " ' 92 '"!.2 ' 9+8+' B+ ' 9+' 19!+C "4". 8 8' #:" "&1' " +!+3' 2' 2!' B"!+' B +' 8 7C 3 D 8 " '" ' 9+' 25 4 +8' 92' 92'- 8' 3 52 +3' 8' B2 6' 28' =;' 25 4 +8' 5" 43' 255"!3 .' "' "@4+!'7+' 3 8 . 89+3' 2 3' 4"52 +3' 1 !IE 9+ BI8' #:" "& 4 8' 54 3+3' 8 59' !2 8' 28' 5"BC 72 D+ +88' 52 " 8 +88' 9"1+' 5"B12! 8"

9+' 25 4 6' 9+"!6' B26' 7+' !+.2!3+3' 28' 2' 8"!' " ' 18659"4". 524' !+24 8B' 9+' !+24 6' 8"' 2!' 28' B+ 24' 27 4 6' 8' 5" 5+! +3' 8' 9" .9' "'4+' '2'1"@+!' 92' 8' B2 +8 +3' '2' "!B 3'1!"5+88' " '2 6'8 .4+' B+ 24' 25 D 6' 28' 2' @9"4+'7 ' 9"8+' D+!824' 281+5 8' @9 59' 211+2!' ' 9+'5"B B" ' "!B8' " 'B2 6' 3 +!+ ' 25 W3 +8' 8' 9+43' "'7+' 9+' ! +'+88+ 5+" 'B 3' 9 8' 278 !25' "!B24' 27 4 6' +!72!' !+-+5 +3' ' 2D"!' " ' @92' 9+' 5244+3' 211+!5+1 " ' :" "&" ' 9+' 9+"!6' " '211+!5+1 " 'B+ 24' 25 D 6' 5" 8 8 8' ' 9+' +!1!+ 2 " ' " '8+ 82 " ' 76' B+B"!6' ' 9+' 8 " '" ' +@'2 3'"43'+J1+! + 5+' + 5+' B+ 24' 27 4 6' @28' B23+'76'9 B'2' 5C " '" ' 9+'1!+D " 8'+J1+! + 5+' " ' 9+' 3 D 3 24' 8 +23' " '7+ .'2 '278 !25'1"@+!' '@28' !+C .2!3+3' 28' B B+3 2 +46' 3+1+ 3+ ' " ' 9+'5" C 5!+ +'5" + '" '5" 85 " 8 +88

'@ 44'7+' " 5+3' 92' 9+' 9+"!6' " '211+!5+1C " '52 '7+'+28 46'288"5 2 +3'@ 9' 9+' 5 " 24' 9+"!6' " 'B 3' "!'@9 4+' '3"+8' " '+J14 5 46' 2A+' 9+'D +@' 92'5" 85 " 8 +88' +J 8 8' "!' 9+' 82A+' " '!+23- 8 B+ ' '!+.2!38' B+ 24' 27 4 6' 28'5" 8 8 .' ' 9+' 5 " .' " ' 9+'+J1+! + 5+' 92'928'7++ '25R !+3'76' 9+' 3 D 3 24' 9+' +@'8 2 " ' 8' 44 B 2 +3'76' 9+' "43'+J1+! C + 5+' 255"!3 .' "' +!72! F '8 ..+8 8' 2' BC 7+!' " ' 3+28' 28' "' 9+' 1"88 74+' @268' " ' 3+24 .' @ 9' '255"!3 .' "' 9+' 5 " 24' 18659"4".6 9+' 5 " 24' 18659"4".6' 3"+8' 9"@+D+!' B2A+' 2' B2!A+3' 23D2 5+' 1" ' 9+' +!72! 2' 2 2468 8' " ' B+ 24' 27 4 6' "!' 76' ' 8 5' 2 3' 9+' 1"88 7 4 +8' ' 9+' @26' " '"D+!' 25 D 6' " ' 9+' 12!' '" ' 9+' 3 D 3 24' 2!+' 5" 5+ D+3' "'4 +' 725A' " ' 9+' 1"88 7 4 6' " ' 255 B 42 .' 2 3' 8 .' +J1+! + 5+' 9 8' 255"!3 .' "' +!72! ' +!+8 ' @9 59' 8' +88+ 24' "' 9+' + +5 D+ +88' " ' B+ 24' 25 D 6' 8' 5" 5+ D+3' "' 7+' 2' !+8 4



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0)"!)' .) '!& "

.) '!&'))"

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D 8 " 'H 9+2! .	74 3 +88 3+2 +88	2B746"1 2' 12! 24 3+2 C +88	961+!25 8 8
28 + 8B+44 " 59 12 +B1+!2 !+	2.+ 8 2 2 "8B 2 2 ++8 9+8 2 2 24.+8 2 9+!B"2 E 5+8 9+8 2	961"8 9+8 2 961"24.+8 2 9+!B"961"E 4+8 9+8 2	961+!"8B 2 961+!8+8 9+8 2 961+!24.+8 2 9+!B"961+!E 8+8 9+8 2

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'!& + ""	78+ 5+'"!' "88H	+5!+28+	5!+28+
B+B"!6	2B +8 2	D2!6 .' 3+C .!++8 " 2B +8 2	761+!B +8 2
81++59 2 + "	3 B7 +88 21928 2 21!"8+J 2	12! 24 21920 8 28	961+!1!"8+I 2

1 ') ' .) '!& "

.")+ ' " ""	+ !"	)+ !"
12!2468 8	12!+8 8 !+ 2!32 "	8128B 5 5" D 48 " 5!2B1

"!'2'5"B14+ +'3 D 8 " '" '81++59'27 "!B24 C +8 9+' !+23+!' 8 !+ +!!+3 "' 9+' 2! 54+8 " ' 81++59' 3+ +5 8' 21928 2 2 3 9"8+' B+ " +3' 3+!' 9+'42 +!' "1 5

'233 " '" 9+'27 "!B24 +8 B+ " +3' ' 9+' 9!++ 274+8' 9+!+' 2!+' B2 6' " 9+!8' " '8"' 3 8 5 46'4"88+8' 3+5!+28+8' "!' 5!+28+8' ' 5C " ' 2 6' " ' 9+8+' 2!+' 5"B14+J' '592!25 +!' 2 3' ' 9+'54288 52 " '1 !1"! 8 "' 7+'5"B14+ +' 9+6' " .9 ' "' 7+' .!" 1+3' 3+!' @"' "!' B"!+' 9+23 .8' 44 3 5 4 +8' 'B"D+B+ '2 3'244 8+ 82 " '3+ 5 + 5 +8' B26'7+'5" 8 3+!+3'12! 24 4"88+8'7 'B2 6' " ' 9+' B"D+B+ '27 "!B24 +8' 3+1+ 3' 1" '8+ 82 " '4"88+8' 2 3' 8"B+' " ' 9+' 8+ 82 " ' 27 "!B24 +8' 2!+' 3+1+ 3+ ' 1"

38 !72 5+8' 'B"D+B+ '274 6' +' B26' 9"@+D+!' 38!+.2!3' 9+' +!' 38 5 " 8' '98' 1425+' 2 3' 54288 6' 9+' B2 +! 24 8"4+46' 28' 2' 5" C D+ + 5+' "!' 9+' B"!+' 52!+ 4' 2 2468 8' "' B2 6' " ' 9+' 5" 3 " 8' 9+' !+23+!' 8' !+ +!!+3' "' 9+'2! 54+8' 3+24 .'@ 9' 9+'8+12!2 +' "1 58 "44"@ .'2!+'4 8 8' " '27 "!B24 +8' 92'52 C " '7+'1!"1+!46' 54288+3' ' 9+' "!+." .' 274+8' 7 ' @9 59' 92D+' B2 6' 1" 8' " ' 8 B 42! 6' "' 9"8+' 24!+236' B+ " +3' (8 " 0 3+5!+28+' ?' 5"4"!' 74 3 +88' 9+B 2 "18 2' 5" !25 " 8' " ' 9+' D 8 24 +43' +2! .0 3+5!+28+' ?' " +' 3+2 +88F 5!+28+' ?' 8 2 ! B' M2' 8 7C -+5 D+' A4 .' 8" 3G' +B"!60 3+5!+28+' ?' 4218+8' "!.+ 4 +88' 1++590 3+5!+28+' ?' 219" 2' 9"2!8+ +88' + " 0 3+5!+28+' ?' 3 8 !25 " ' "D+B+ 0 5!+28+' ?' !+B"!' 5" !25 !+' B1 48 " ' 52 24+186' 2 9+ "8 8F 3+5!+28+' ?' 2 2J 2' @+2A +88

44 9+' 27 "!B24 +8' B+ " +3' 9 8' 2!' B26' 7+' 5" 8 3+!+3' R 2 2 D+' D2! 2 " 8' !"B' 9+' "!B24' 7 ' 9+!+' 2!+' " 9+!' 27 "!C B24 +8' 92' B26' B"!+' 1!"1+!46' 7+' 5244+3' D2! 2 " 8' 'R 24 6' "B+' "' 9+8+' 7 ' "' 244' B26' 7+' 3+85! 7+3' 28' 1+!D+!8 " 8' "' "!B24 5" 3 " 8' 3+!' 9 8' 9+23 .' MR 24 2 D+' 27 "!B24 +8G 9+' B"8' 5"B B" '2!+0 9244 5 C 2 " 8' 44 8 " 8' 3+4 8 " 8' 244"59 ! 2' 1"468+8E 9+8 2' D+! ."' 3 25 8 8' M 14+282 '8+ 82 " ' !"B'"!3 2!6'8 B 4G'12!"8B 2' M8B+44 1+!D+!C 8 " G'A2A"8B 2' M8 7-+5 D+' 8B+44 8+ 82 " 8' "' 2' " + 8 D+' 592!25 +!G' 2 3' 12!2.+ 8 2' M 28 +' 1+!D+!8 " G

9+!+'2!+' @"' D+!6'.+ +!24 B+ 24 27 "!B24 C +8' +259' 5"B1"8+3' "' 2' B7+!' "' 1+!D+! +3' 3+5!+28+3' "!' 5!+28+3' 5 " 8' 9+8+' @"' .+ +!24 5" 3 " 8'2!+'5"B B" 46'5244+3' 82 6' 2 3' ++74+EB 3+3 +88

9+'42 +!' +!B' 8' 8+3' '3+85! 7 .' 3 C D 3 248' @9"' 92D+' "'2 2 +3'2' "!B24 B+ 24 8 2 8' @9+ '5"B12!+3' @ 9' " 9+!' 3 D 3 248' ' 9+' 5"B B 6' 9"8+' 3 D 3 248' 2!+' 5244+3' 82 +' @9"' 92D+' 89"@ 'B2!A+3'3+D 2 " '!"B' 9+ !'"@ ' "!B24 B2 +!'" '++4 .' 9 AC .'2 3'25 .' 9+'3 8 5 " 8' 7+ @++ ' 9+' @"' 54288+8' 8' 7!" .9 '" ' ' B"!+' 3+ 2 4' ' 9+' 2! 54+8' 3+24 .'@ 9' 9+8+' "1 58 ' ' '

'E' '?' ++')8

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' ' '? 9+' 5" +!C B+ '" '2'3+.!++' "'2'52 3 32 +' @9"' 928' 4 44+3' 9+' +5+882!6'!+R !+B+ 8' "!' '7 '8' 274+' "'7+'1!+8+ ' 9+' 1!+8+ 2 " '"!'3+.!++8'@28' "!'8"'4" .'2' B1"! 2 ' +2 !+' '2'8 3+ L8' 52!++!'5" +5 +3'28' '.+ +!2446' @28' @ 9'3 8C 1 2 " 8' 92' 24 9" .9' 9+' "!B' 928' 3 8C 211+2!+3' 9+' 5+!+B" 24' @9 59' 8' B"!+/1 5C !+8R +' 92'8. 52 ' 928' 7++ ' !+ 2 +3' +D+ ' 76' 9"8+' D+!8 +8' @9 59' 52 " '4""A' 725A' "' 9+' 1+! "3' @9+ ' 9+' 3+.!++' 5" +!B+ ' B+2 ' 8"B+ 9 .' + 5+' 9+' 1!25 5+'" ' C 8 8 .' 92'244' 52 3 32 +8' "!'3+.!++8' 7+' 1!+8+ ' '1+!8" ' 8' 24B"8' D+!824' ' !+2' ! 2

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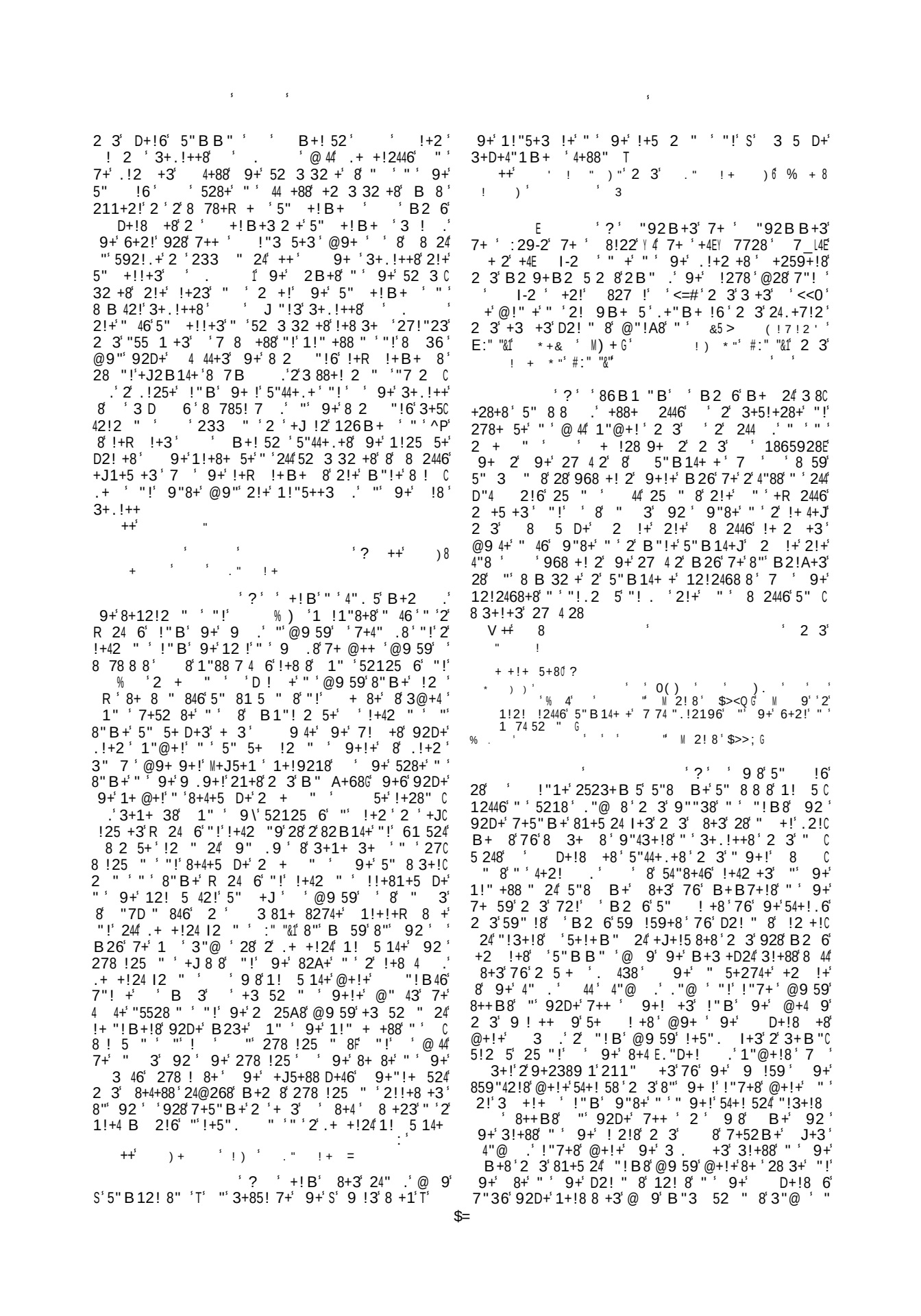

Painted by Maria L. McMickin, Albany, N.Y.

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AMERICAN INTERCOLLEGIATE SYSTEM.

D.D. (Yale). LL.M. M.D. (Columbia). PH.D. Litt.D. (U. of Pa.). LL.D. MUS.D.

B.S. (Cornell). M.A. (U. of Chicago).

ACADEMIC COSTUME

the present. The cold buildings of medieval times required capes and hoods for warmth. The cap replaced the hood for the head and the cape with hood was modified into the present hood, which by colors, trimming, and linings becomes perhaps the most noticeable and significant part of the costume in British, Colonial, and American colleges. Full black robes are used by professors in German universities on their ceremonial occasions; in the University of Paris the costume is a gown of black with colored facings, with a colored scarf hanging from the shoulder and a high turban with a colored crown. Different colors denote different faculties. For high occasions they have gorgeous robes made largely of silk of the faculty colors—scarlet, crimson, and yellow.

Academic costume is largely used in the colleges and universities of the British Empire and the United States. In the former, each university has its own empirical usage, small relationship being discoverable between the various codes, except in the shapes of the caps, gowns, and hoods. The colorings are unrelated, except that red gowns and red hoods are indicative of a doctorate. In the United States there is in general use a uniform system adaptable to each institution, and differing at each institution only in the college colors which line the hoods.

In the colored plate, illustrating the American usage, the hood linings are seen treated heraldically as inverted shields, the colors being arranged as one or more chevrons of the secondary color, upon a ground of the primary college color, or divided parti-per-chevron. Where the same colors have been used by different institutions, — generally widely separated, — different shades of the same colors have been followed. In the British plate, the empirical character of the usage is evident.

Bachelor's Cap, Gown, and Hood. Doctor's Cap and Gown. Master's Cap, Gown, and Hood.

The following are the codes of Oxford, Cambridge, and Edinburgh:—

UNIVERSITY OF OXFORD

B.A.	M.B.
Gown. Black stuff. Hood. Black stuff trimmed with white fur.	Gown. Black silk. Hood. Blue silk trimmed with white fur.
M.A.	**M.D.**
Gown. Black silk. Hood. Black silk lined with crimson silk.	Gown. Black silk. Hood. Scarlet cloth lined with crimson silk.

8

"@ 425A 8 4A
""3 425A 8 4A 4 +3
@ 9 .4"886 7425A 8 4A

"@ 425A 8 4A
""3 4 + 8 4A ! B B+3
@ 9 @9 + !

8

"@ 425A 8 4A
""3 52!4+ 54" 9 4 +3
@ 9 7425A 8 4A

"@ 425A 8 4A
""3 9 + 8 4A H 7!"
523+ 4 +3 @ 9 5! B8" 8 4A

> 2 3 >

"@ 425A 8 4A
""3 4 + 8 4A ! B B+3
@ 9 @9 + !

"@ 425A 8
""3 4 + 8 4A

>5 2 3

"@ 425A 8 4A
""3 52!4+ 54" 9 4 +3
@ 9 5! B8" 8 4A

"@ 425A 8 4A
""3 52!4+ 54" 9 4 +3
@ 9 !+ 59 .!26

"5 "!8 " D 6 D 4 2@ +3 5 +
8 5 5 + 5+ 2 3 + +!8 2!+ + 4+3 "@+2!
2 852!4+ 54" 9 ."@ 25+3 2 3 4 +3 @ 9 9+
5"4"!" 9+ 4 ." 9+ 9""3" 9+ !+81+5 D+
25 4 +8

("!

"@ 425A 8
""3 425A 8
! B B+3 @ 9 @9 + !

"@ 425A 8 4A
""3 425A 8 4A 4 +3
@ 9 @9 + 8 4A

"@ 425A 8 4A
""3 52!4+ 54" 9 4 +3
@! 9 1 A 8 4A

"@ 425A 8 4A
""3 425A 8 4A 4 +3
@ 9 7425A 8 4A

"@ 425A 8 4A
""3 425A 8 4A ! B B+3
@ 9 @9 + !

"@ 425A 8 4A
""3 52!4+ 54" 9 4 +3
@ 9 1 A 8 4A

"@B 425A 8 4A
""3 +3 1 5+ 8 4A 4 +3
E@ 9 1 A 8 4A

8

"@ 425A 8 4A
""3 425A 8 4A ! B B+3H
@ 9 @9 + !

"@ 425A 8 4A
""3 425A 8
! B B+3 @ 9 @9 + !

8

"@ 425A 8 4A
""3 425A 8 4A 4 +3
@ 9 @9 + !

"@ 425A 8 4A
""3 +3 1 5+ 8 4A 4 +3
@ 9 @9 + 8 4A

"5 "!8 " D 6 2@8 +3 5 + 2 3
8 5 2!+ + 4+3 "@+2!
25+3 2 3 4 +3 @ 9 9+ 5"4"!" 9+ 4 ." 9+
9""3" 9+ !+81+5 D+ 25 4 +8

! "!

"@ 425A 8 4A
""3 425A 8 4A 4 +3
@ 9 @9 + 8 4A

"@ 425A 8 4A
""3 425A 8 4A 4 +3
@ 9 1 [4+ 8 4A 7"!C
3+!+3 @ 9 !

"@ 425A 8 4A
""3 425A 8 4A 4 +3
@ 9 5! B8" 8 4A +3.+3
@ 9 @9 + !

"@ 425A 8 4A
""3 425A 54" 9 4 +3
@ 9 1 !14+ 8 4A

"@ 425A 8 4A
""3 425A 54" 9 4 +3
@ 9 5! B8" \ 4A

5

"@ 425A 8 4A
""3 425A 8 4A 4 +3
@ 9 74 + 8 4A +3.+3
@ 9 @9 + !

"@ 425A 8 4A
" J4 425A 8 4A 4 +3
@ 9 4+B" E6+44"@ 8 4A
+3.+3 @ 9 @9 + !

+

"@ 425A 8 4A
""3 425A 54" 9 4 +3
@ 9 74 + 8 4A

"@ 425A 8 4A
""3 425A 8 4A 4 +3
@ 9 4+B" E6+44"@ 8 4A

44E3!+88 ."@ 8 "! "5 "!8 " 9+) D+!8 6
" 3 7 !.9 2!+ B23+ " 8 1+! + 852!4+
54" 9 4""8+ 84++D+8 4 +3 @ 9 ! 59 8 4A " 9+
5"4"!" 9+ 4 ." 9+ 9""3" 9+ .!23 2 +8
3+.!++
9+ "44"@ . 8 9+ +!5"44+. 2 + 68 +B
8+ 9+ +3 2 +8

" 7425A 8 ! "! 3 "! 1" +3
84++D+ "1+ "!54"8+3 "" 9""3 _ _ _ _
_ _

! " "F 8 4A 1!+ +!2746 4" ." 54"8+3 84++D+ @ 9
84 +2!" 11+!12! "!2!B " [+ @ 9 9""3
+ "? MG 8 4A 1!+ +!2746 @ 9 !" 3 4G"44 84++D+F
."@ 25+3 3"@ 9+ !" 8 2 3 72!!+3 " 9+ 84++D+8
@ 9 7425A D+9!+ "!D+4D+ @9"446 "! 12! " 9+
3+.!++ 5"4"!" @ 9 9""3

!+8 3+ 8 92 5+44"!8 2 3 +2 8 B26 92D+
H 9+ 6"A+8 !" 8 2 3 72!8 ! B B+3 @ 9 ."43
7!2 3 2 3 B26 @+2!." 43 288+48 +B7+!8
" 9+ "D+! ." "36 M ! 8 ++8 + 5 G B26
@+2! 9+ "5 "!!8 ."@ 3 ! ." + !+" 5+

""38 89" 43 7+" 9+ 82B+ B2 +! 248 28 9+
"@ 8 2!+ " 3 8 5 D+ 8921+8 "! 259+4"!
28 +! 2 3 "5 "! 2 3 2!+ 4 +3 @ 9 8 4A
89"@ ." 9+ " 5 24 5"4"!8 " 9+ 8 " 5" C
+!! ." 9+ 3+.!++ "! @ 9 @9 59 9+ @+2!+! 8
5" +5 +3 2 3 2!+ ! B B+3 @ 9 D+4D+ " 9+
5"4"!3 8 5 D+ " 9+ 3+.!++ 9 8 ?

! 8 2 3 4+ +!8 @9 + !2)!6 8 4D+!).!26
9+"4".6 852!4+ . ++! . " "!2 .+
2@8 1 !14+ 92!B256 " "4 D+
9 4"8"196 74 + + 8 !6 " 4 425
! + 5+ ."43E65 "@ (+ +! 216 85 + 5+ .!26
+ 2! 8 7!"@ "!+8 !6 " ! 88+
+3 5 + . @ 4 7!2!6 85 + 5+ 4+B"
8 5 1 A +32.".6 " 4 .9 74 +
"B B+!5+ 2 3 55" 2 56 3!27

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BRITISH USAGE IN ACADEMIC COSTUME.

B.A., Oxford

D.D., Oxford (Convocation Robe).

Sc.D., Oxford (Full Dress).

M.A., Oxford.

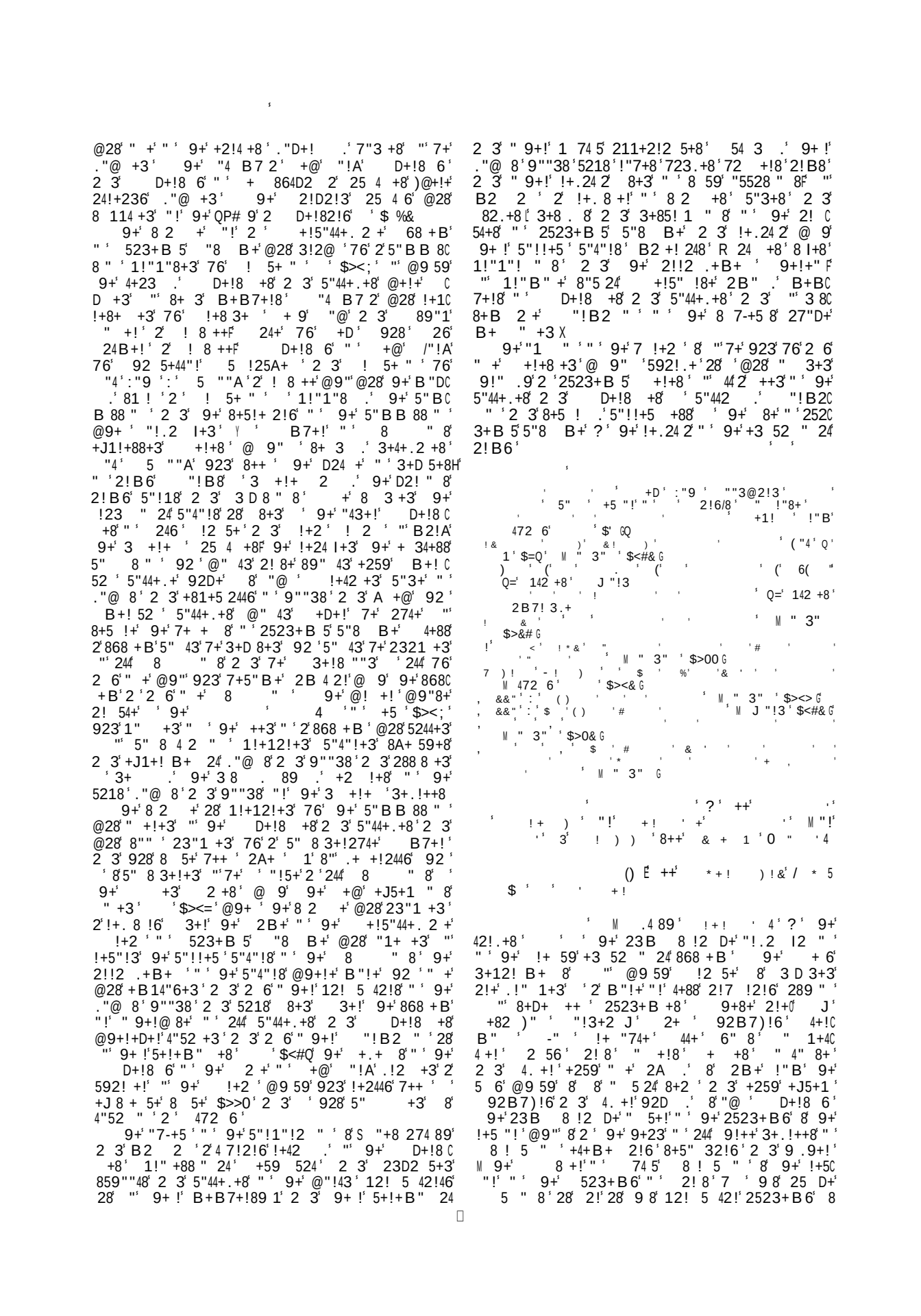
Mus.D., Oxford.

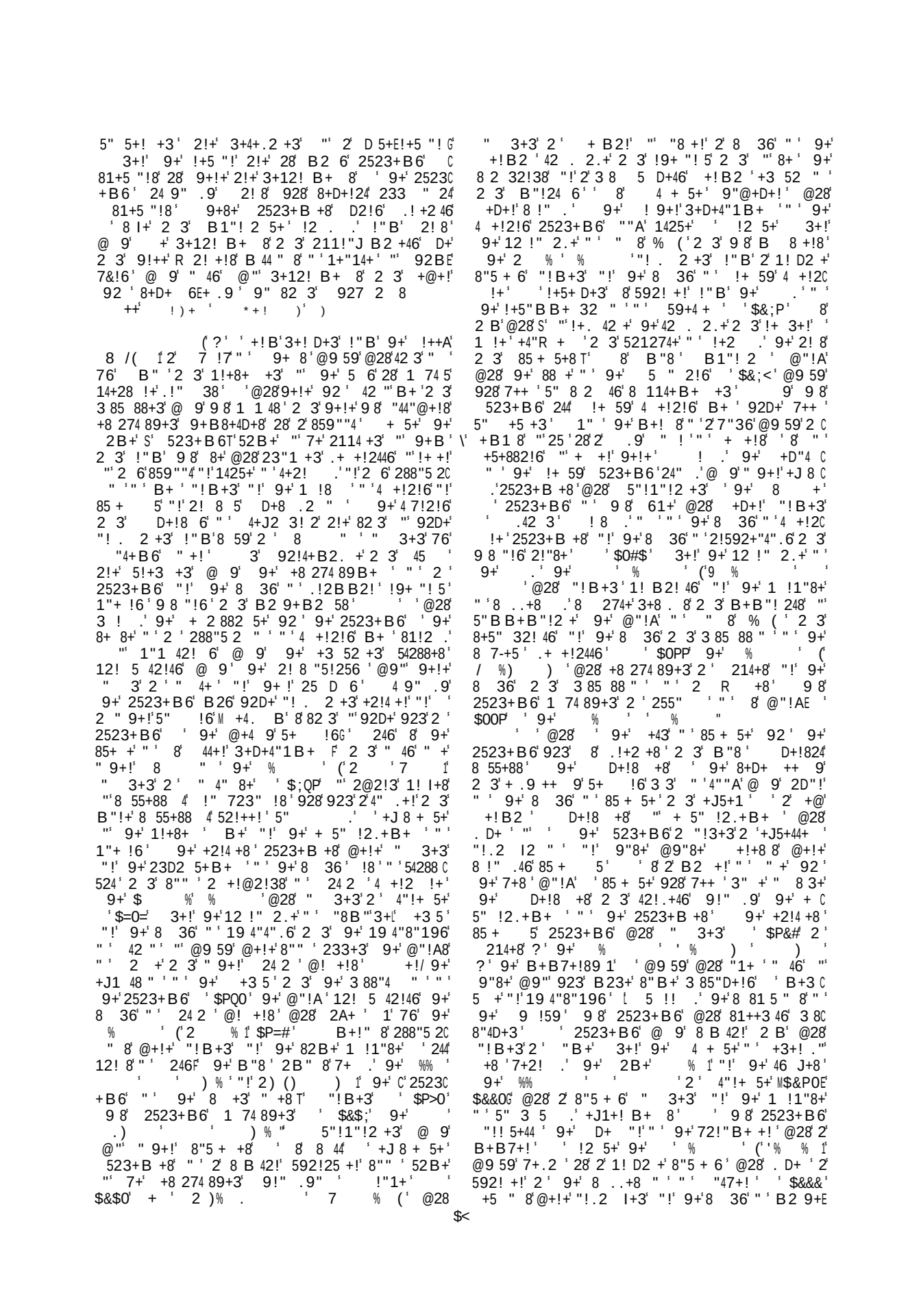
Pensioner of Trinity College, Cambridge.

D.D., Edinburgh (Full Dress).

Vice-Chancellor, Cambridge.

D.C.L., Oxford (Full Dress).





B2 58 1968 58 2 3 59+B 8 !6 1+ 8 " 8 @+!+ . D+ B+B7+!8 76 9+ . 2 3 B" +6 @28 1!"D 3+3 "! 8 ! B+ 8 +852! +8 2 3 2852 @+!+ B+B7+!8 " 9 8 8 " 2 3 ! 8225 +@ " 7+52B+ 2 "!+ . 288"5 2 + 2 5) 2 +! 9+ 2523+B6 @28 !+5" 8 +3 $&<< +D+!6 !+ 59 85 + 8 " " +@28 2 B+B7+! +! 7+ .' 27"4 89+3 $0<Q 9+ 2523+B6 @28 !+D D+3 2 3 !+5" 8 +3 $>$Q 9+ +2!4 +8 85 + 5 2523+B6 +!B2 6 @28 9+)) 1 3+3 76 : !B $&0Q 1!" +88"! 2 4 "! "! 9+ !+1+ " 2) 3 85 88 " " +J1+! B+ 8 9+ 8 .C .+8 " " + 7 I !+3+! 5A +8 274 89+3 9+ % (' '% % 2 +!4 $0## @28 !+5" 8 +3 $>$Q @ 9 " !8+5 " 8 1968 524 B2 9+B2 524 19 4"8"19 524 2 3 9 8C "! 524 9+!+. 42!B+B7+!8 2!+ 12 3 B" . 8 B+B7+!8 9+ 2523+B6 928 54 3+3 9+ @" B7"43 8 2D . 6 594+ +!B259+! 2 3 2 A+ 3+! 9+ 4 + 5+ " 9+ 1!+D2 4C .' + 3+ 56 2 +@ "44"@+!8 " 25" B+ "C .+ 9+! $&=P "! 9+ 3 85 88 " " +J1+! B+ 24 8"5 + 6 " 9+8+ B++ .8 2!"8+ 9+ ' % :" "&1 @9 59 !+5+ D+3 8 592! +! $&&Q @" " 9+!' 3+D+4"1B+ 8 " 9+ 2523+B6 92D+ 7++ "! 9+ 8 36 " B+3 5 + 2 3 8 !.+!6)) "! % +! B2 6 $&&Q % (') (+ 2 2 3 9+ % (!2 5+ 2!+ 9+ B"8 B1"! 2 G 2 3 9+ +2! 8 M 9+ % (.42 3 $0&> 2 3 9+ % ($ '%) 2! 8 $&=> 2!+ 5" 81 5 " 8 +J2B14+8G 9 8 61+ " 2523+B6 928 3+D+4"1+3 9+ +3 2 +8 7+. @ 9 9+ % $ % ' % 1 @9 59 + -2B !2 AC 4 @28 9+ "! . 2 "! $0=; $0># 9+ % % ('% % 52B+ 7+ .' "! 9+8 36 " B+! 52 2 R +8 2 3 2 !24 9 8 "!6 $>$Q @28 " 3+3 9+ $ % ( ) '% % 1 @9 59 8"" 3+D+4"1+3 2 4 7!2!6 2 3 B 8+ B " 5" C 8 3+!274+ D24 + 12! 5 42!46 9+ +438 " "! C 9"4".6 2 3 5" 59"4".6 $>&; 9+ % % '% % @28 592! +!+3 76 " .!+88 28 2 " 5 24 "!.2 "! 85 + 5 D+8 .2 " $><> 9+ = % ('% % @28 "!B+3 76 9+ 5"!1"!2 " " 8+D+!24 8"5 + +8 @"!A .' 289 . " ! 9+! 3+D+4"1B+ 8 9+ % % ($ % ' % '% % 1 " 3+3 $>>< 9 423+419 2 "524 2523+B +8 248"" +J 8 "!' 9+ + 5" !2.+B+ " " +2! 8 ! 46 523+B +8 ?' 9+ B 334+ " 9+ 8 J ++ 9 5+ !6 2!"8+ 3+!' 9+ 4 + 5+ " !+2 8+8 4 A+ 99 " " 28 .4 " +M) 2G 9+ 23D"5256 " 2 61+ " 859""4 @9+!+ 9+ 8" 8 " "74+B+ 2 3 42 3+3 .+ !6 5" 43 "7 2 9+ 5" ! 46 !2 .' @9 59 9+ 1 74 5 859""48 " 9+ 326 3 3 " " +! 9+8+ 859""48 @+!+ A "@ 28 % " 9+ 5 !! 5 4 B @+!+ 54 3+3 +J+!5 8+8 2!B8 2 3 .6B 28 58 2 B"3+! 42 . 2.+8 1!25 524 B2 9+B2 58 2 3 2 !24 19 4"8"196 59 2 61+ " +3 52 " 8 8A+ 59+3 76 ! B19!+6 47+! G) 4 . % 1 $P0Q 8+ .' "! 9 2 1!"-C +5 "! 9+ +3 52 " " 9+ @2!38 " 9+ 5" ! 2 3 S" 9+!8 " 9+6" 9 " "7 4 6 2 3 .+ 4+C B+ T 5" 81 5 " 8 +2 !+ 9+ 7""A 8 9+ +B1928 8 @9 59 8 42 3 " 9+ !2 . .4 89 9+ + !+ 2 B " 9 8 61+ " +3 52C " B26 7+ 8 B B+3 1 47+! 8 "@ 42 C . 2.+ S" "!8 59 28 ."D+! 5"B B" @+248 " .9 !2 9+! " 7+ 3 9+B8+4D+8 " 9+ 1!25 5+ 9+!+ 92 " 7+ +3 " 9+ 7""A 89 5 !5 BC 8 2 5+8 " 9+ 82B+ T 9+ 1!25 524 + 3 @28 9+!+ "!+ 11+!B"8 9+ !2 .' " 9+ 2523+C B +8 +D+!24 " 9+!' @"!A8 " 9+ 82B+ A 3 211+2!+3 9+ 8 J ++ 9 2 3 8+D+ ++ 9 5+ ! +8 9+ !+8 4 " 9+ + 3+ 56 @28 8++ 9+ ! 8+ " 2523+B +8 2 9 8 B+ +!C B2 6 9+!+ @28 2 @ 3+81!+23 3+D+4"1B+ " 9+B 3+! 9+ 4+ " ; " !2 5+ 9+6 @+!+ + 5"E !2.+3 76 59+4 + 3+! @9"8+ 12 !" 2.+ 9+ 523+B6 " " !8 @28 +8 274 89+3 @9+!+ 9+ 1 1 48 @+!+ 2 .9 1968 524 85 + 5+ B2 9+B2 58 .+". !2196 !+ 59 24 2 12 89 9 8 "!6 9+!243!6 2 3 B2! 24 255"B14 89B+ 8 446 9+!+ @28 2 8 B 42!2523+B6 3+!!"624 12 !" 2.+ .42 3 9+ 8 !" .+8 23D"52 + " 9 8 61+ " +3 52 " @28 4 " :" "&1 @9" 9+ 0 % ( )% M$&==G 446 3+D+4"18 9+ 2 B8 2 3 3+248 !+1!+8+ +3 76 9+ 2523+B6 9+ 0 % 8 244 9+ B"!+D24 274+ 28 @28 728+3 " 4 " 18 1!25 524 +J1+! + 5+ "! 2 89"! B+ 2 2 6 !2 + A++1 .' 2 2523+B6 $&=# 2 1!"1"824 @28 B23+ 9+ " 8+ " "!38 S 27" 9+ +!+5 .' " 2 523+B6 "! 9+ 7!++3 .' 2 3 !2 .' 1 " 6" .' "74+B+ 2 3 .+ 4+B+ T 9+ 2 +B1 " " !"3 5+ 2523+B +8 .42 3 3 " 8 55++3 9+ +J1+! B+ 8 " ! 24 92I2! +!7 +! M$&=<G 2 3 " 2 7+! M$&>QG " 3" @+!+ 89"! C 4 D+3 9+ 2523+B +8 28 3+D+4"1+3 !2 5+ 2 3 +!B2 6 1+! "!B+3 2 B1"! 2 5 " B"3+! I .' 9+ 5 !! 5 4 B " 9+ 8+5" 32!6 859""4 .42 3 9+ 8 . .+8 " 5" 2 +3 4 " 8 0 % 211+2!8 2 B"3 +3 "!B " 92D+ 7++ 2A+ 1 9+ 2523+B +8 " 9+ 3 88+ +!8 @9 59 2!"8+ 28 2 !+8 4 " 9+ !+4 . " 8 "4+!2 5+ " 9+ 1+! "3 M ++ -) *8 +!) "! G " 5" "!B 8 523+B +8 ? 6 9+ 5 " "!B 6 M$&&QG " 46 @+!+ 3 88+ +!8 +J54 3+3 !"B D+!8 6 1! D 4+.+8 7 9"8+ @9" 76 92 B+ 923 24!+236 5"B14+ +3 9+ ! D+!8 6 +3 52 " @+!+ 3+72!!+3 !"B +259C .' 76 9+ +5+88 6 " "7 2 .' 2 7 89"1L8 4 5+ 8+ 9+ !+8 4 @28 92 9"8+ @9" 3 3 2 +B1 " +259 3 3 8" 76 8 +24 9 "!' @+!+ 5"B1+44+3 " B"D+ 27" 76 9+ !+4+ 4+88 +88 " 9+ !' 1+!8+5 "!8 @28 9 "! 9+ " .42 3 12! 5 42!46 92 9+ ++3 " 9 .9+! +3 52 " @28 B"8 +4 !"B @+44 923 2 C +B1 +3 " B++ 9+ 3+B2 3 76 +8 274 89 .' 9+ D+!8 6 " !92B :" & $&P0 7 9+ 12 + @28 @ 93!2@ 2 9+ @" 9" 82 3 " 5" "!B 8 B 8 +!8

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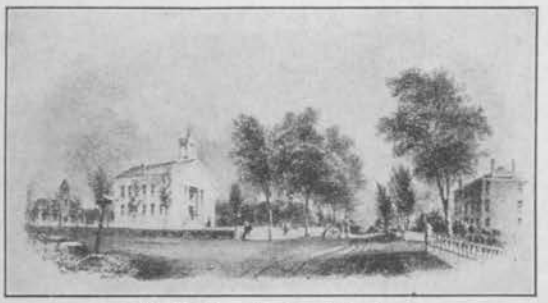
ACADEMY

language, not only of the schoolroom, but also of the playground. When the exigencies of practical life did force the grammar school to provide English, writing, and arithmetic, such studies were looked upon as extraneous, introduced merely "in order to qualify such for business as intended to make no further progress in learning." Moreover, for the most part, the grammar school had grown up within some dominant religious establishment which it in turn tended to perpetuate. This was as true of the Episcopal aristocracy of Maryland, Virginia, and South Carolina as it was of the Puritan hierarchy of New England.

As the eighteenth century progressed, this unity of original control was shaken. Whitefield and the "New Lights" stirred the intrenched religious conservatism from Georgia to Massachusetts. A host of Presbyterian Scotch and Irish entered into the Middle and Southern colonies. Baptists increased in numbers, and Methodism began to be felt. The day of the nonconformist was at hand. At the same time



An Early New England Academy.

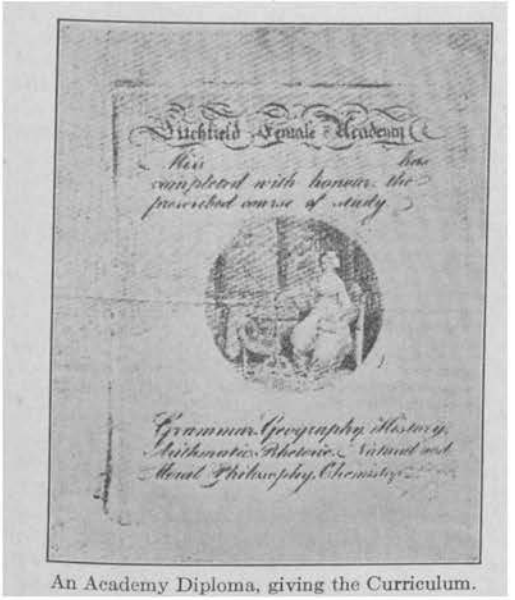
there was rising everywhere an American spirit which began to be conscious of itself and desirous of settling American problems in an American way. New institutions were demanded. It has been shown in the preceding section how that after the Restoration the academy arose in England to meet, in an individual fashion, the nonconformist need of education. Probably the American academy is not so much a direct transplanting of the English institution as it is a spontaneous outgrowth from somewhat analogous circumstances. The old grammar school had been exclusive in aim and curriculum; the university was its *raison d'être*. The new institution must be democratic, answering to a majority who are not to go to college. Moreover, it must furnish a training more evidently suited to the demands of a new country. Latin had ceased to be the language of practical learning; the Americans recognized the fact. Science as an agency of civilization was beginning to be felt, at least in possibility. An ever-extending frontier demanded a school that could care for pupils from remote distances. Flexibility to meet widely varying local needs was an essential requisite. In this situation the academy arose.

To state where in America the academy originated is not easy. Many considerations deny that credit to the free school or "academy" of "Charlestown" (S.C.) in 1712, although no earlier application of the term to a secondary school has been pointed out, and provision was there made for "navigation and surveying and other useful and practical parts of the mathematics." Nor can the credit be given to Tennent's "Log College" in New Jersey (1726), which Whitefield in 1739 called an "academy," although this was the parent of the "log college" movement among the Presbyterians; and the "log college" did in many respects belong to the academy type. To Franklin's Philadelphia academy (proposed 1743, established 1751) no exception can be taken. (See PENNSYLVANIA, UNIVERSITY OF.) Type and name unite, apparently for the first time in America. By general consent this has been taken as the first clear case of the American academy. As the Revolution drew near, the Presbyterians and other nonconformists established, especially in the middle and southern colonies, secondary schools which they frequently called academies. Kingston, N.Y., and Newark, N.J., provided "academies" in 1773 and 1775 respectively. By 1790 the new type of school was definitely established in all parts of the nation. Among specific institutions, the Phillips academies at Andover (1780) and Exeter (1781) and Erasmus Hall (1787) at Flatbush, L.I., deserve especial notice for their far-reaching influence.

While the academies are primarily institutions of semi-private or local origin, most of the states assisted in their founding and support. Several states provided systems. Georgia and New York furnish the most interesting early legislation, each in turn curiously anticipating the other. Georgia's constitution of 1777 called for "schools" in each county, "supported at the general expense of the state." In 1783 her legislature provided by land endowment for a system of county academies, and on Feb. 25, 1784, similarly endowed a university. New York, on May 1, 1784, chartered a university and provided for "schools and colleges" to be parts of the university (the grade of the schools not being specified). Georgia amended her university charter in 1785, requiring that "all public schools . . . shall be considered as parts or members of the university." The university should "prescribe what branches . . . be taught . . . in each"; and should "also examine and recommend the instructors to be employed in them." In 1787 New York amended her 1784 act so as to authorize and require the regents "to visit and inspect all the colleges, academies, and schools which are or may be established in this state." In 1813 New York established a "Literature Fund," the income of which went to the support of academies. In 1821 Georgia established a similar "academic fund" of $250,000. But by

1840 Georgia had abandoned support and control of her academies in favor of elementary education, while at the same time New York began to increase both her support and control.

Many other states adopted one or more of the features above described. Massachusetts in 1797 sets out a policy of land endowments of properly located academies. The next year Kentucky does the same for a county system. Later Maryland, Louisiana, Tennessee, and Indiana adopt the county system. To speak generally, the states subsidized the academies by one plan or another, leaving them, for the most part, to self-perpetuating boards or other forms of local control. Tuition charges were almost invariable. By the middle of the nineteenth century, when the movement began its decline, the academies were very numerous throughout



An Academy Diploma, giving the Curriculum.

the Union, forming in many localities the only very definitely organized schools, and admitting pupils of all grades.

The curriculum of the early academy has already been suggested. Latin still remained as the backbone of the course, though taught now in English and for professedly different reasons. Greek was frequent, if not usual. English grammar held an increasing place from the first. Arithmetic and geometry appeared generally, astronomy frequently. "Geography with the use of the globes" was quite the proper thing to advertise. Declamation was usual, as befitted a free country where oratory was much in demand. Quarterly oral examinations convinced patrons "of the merits of the institution and the literary attainments of the scholars."

The academy was more open to girls than had been the grammar school. In 1780 there was begun in Philadelphia an academy for girls, an example followed increasingly. The most famous of such, Mrs. Willard's seminary, founded in 1821 at Troy, N.Y., may properly be said to be the beginning of the higher education of women in America. Many academies were coeducational. In the earlier days, this was frequently effected by "female departments." Thus in an 1815 advertisement, "the three departments, classical, English, and female, will be furnished each with an instructor; besides which the Rector will divide his time and exertions among them."

One of the reasons urged by Franklin for the establishment of his academy was "that a number of the poorer sort will hereby be qualified to act as schoolmasters in the country." The argument might have been generalized for the whole country. The academy came to be the chief source of supply of elementary teachers, a fact many times recognized by general school authorities. In 1830 specific preparation of common school teachers was undertaken at Phillips Andover, while three years later "teachers' classes" were provided in many New York academies. When the state normal school (*q.v.*) came as a distinct institution, it was in fact but the academy transformed for this specific purpose.

The decline of the movement began toward the middle of the nineteenth century, earlier for the cities and urban regions, later for the rural communities. Many of the smaller academies had never been true secondary schools; such disappear amid improved common schools. The better endowed of the academies, especially those founded by individuals or by churches, remain to-day as important preparatory schools. Many academies that had been founded by state or local public authorities were changed into high schools, as in the "county seminary" system of Indiana and the county academies of Maryland. In the latter case the change is still in process.

Several reasons may be assigned for the general change from the academy to the public high school. There had grown up a much stronger feeling for the public control and support of popular education. Beginning with the common schools, the movement extended itself later to the field of secondary education. From this point of view the high school is the academy brought into the public school system. Again the academy, with the increase of wealth and the growth of higher education, had become in large measure a college preparatory school. From this point of view the high school is a recurrence to the democratic type which the academy had abandoned. To speak generally, the academy was the product of the frontier period of national development and the *laissez faire* theory of government. When these conditions departed, the academy gave place to the high school as the predominant secondary school of the American people.

E. E. B., I. L. K., AND W. H. K.

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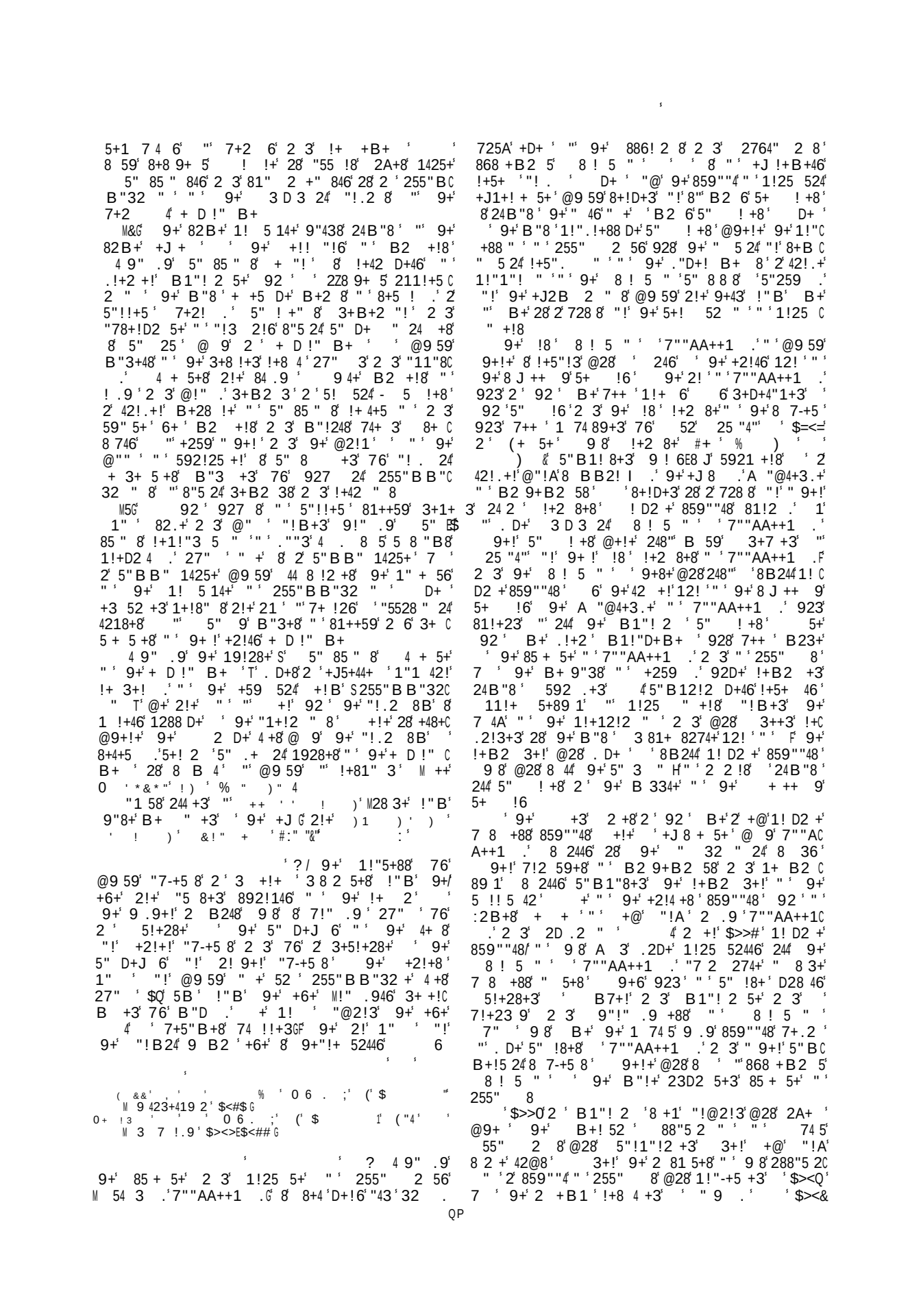

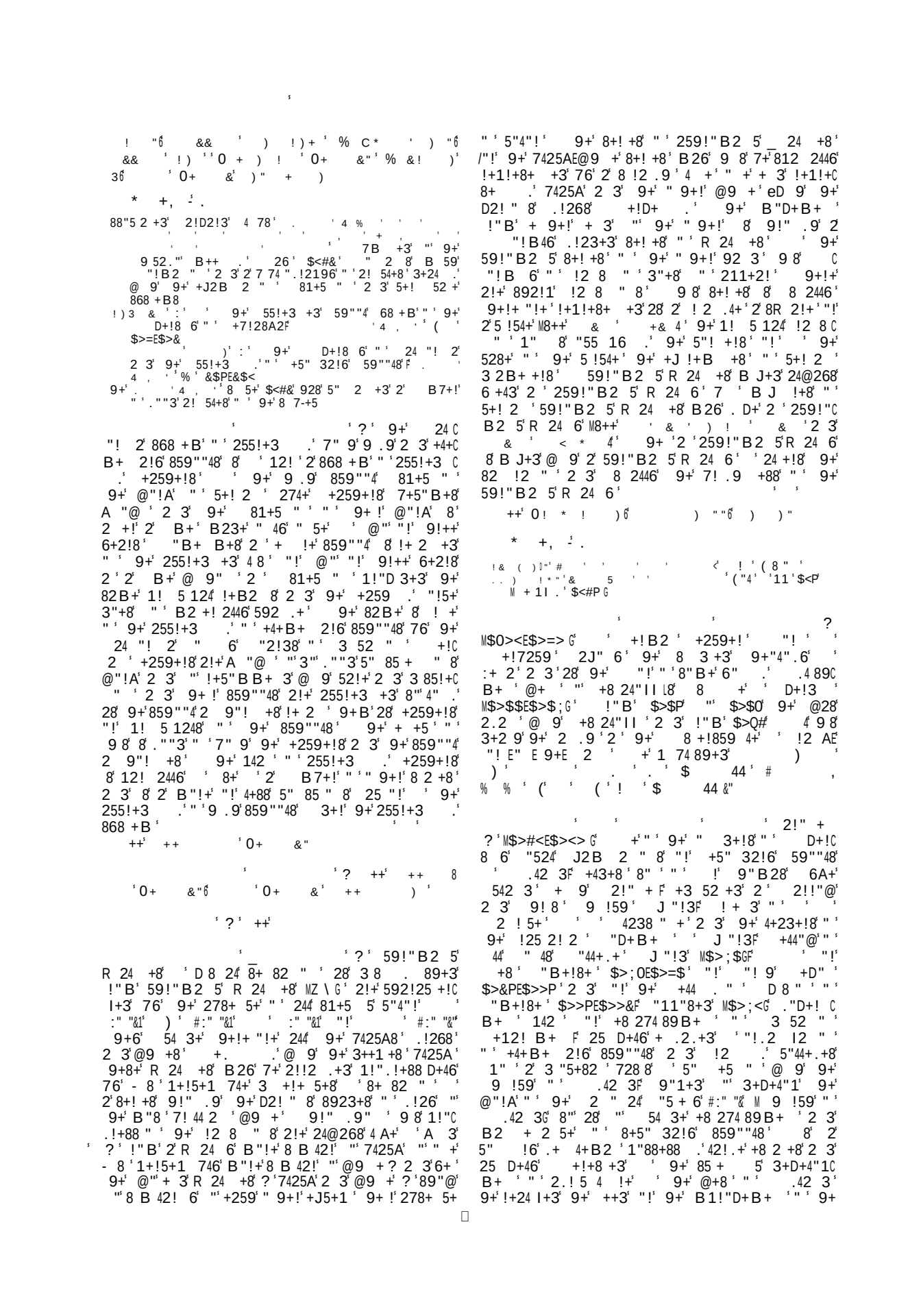

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5" +5 .' 9+8+ 5+ +!8 ' 5+ 9+8+ 5+!+7!24 288"5 2 " 8 2!+ " ' 28 2 ! 4+ B23+ 3+ + 4 +J1+! + 5+ 928 "!.2 !+3 9+B "' 927 8 2 9 B2 ' 7+ .' ' @9"B 9+ 7!2 ' 5" !"48 2 D+!6 42!.+ 12! ' " 9+ B"D+B+ 8 " ' 9+ 7"36 25 8 ' 2 ' BB2 !+ 2 3 2 B4+88 B2 +! 4 +J1+! + 5+ 928 2 .9 '9 B " 9+!C @8+ +!+7!24 5" !"4 B+2 8 52125 6 "' 25R !+ 927 8 ' @ 9 2 5"!!+81" 3 .' 9+414+88C +88 4 9+8+ 927 8 8924 92D+ 7++ ' "!B+3 ' '@ 9 9+ B2 !+ " ' 9+ 9 B2 ' !25+ 9+!+ 2!+ D+!6 +@ 592!25 +! 8 58 @9 59 2!+ " ' ' 2 B+28 !+ 25R !+3 8"' @ 9 +D+ .!+2 +!' ! 9 B26 ' 7+ 82 3 92 ' 9+!+ 2!+ D+!6 +@ @9 59 2!+ " ' ' 12! ' 3+1+ 3+ ' " 9+!+3 6 3++3 ' @+ +J5+1 ' +.2 D+ B+C 592 524 "! 59+B 524 + +5 8 8 59 28 B 42C " 8 "!' B"3 52 " 8 " 88 + 76 59+B 524 2.+ 5 +8 ' @" 43 8++B 92 ' 244 9+ !+8 ' 2!+ 2 !+8 4 ' " 1"8 D+ 1" + 24 +8 "!' 3+D+4"1C B+ ' " ' 9+ 12! ' " ' 9+ 3 D 3 24 ' @9 59 ' ! ' 2!+ 3 + "' 9+!+3 6 9+ 1"@+!' "' 4+2! ' 8 B23+ 1 " ' 9+ 1"@+!' "' 3+D+4"1 ' 2 .!+2 ' B2 6 @268 +259 " ' @9 59 8 3+1+ 3+ ' 1" ' 8"B+ 9 .' ' 9+ 8 ! 5 !+ "!/" 9+!' 1!"1+! +8 " ' 9+ 7"36 ' 2 3 8 ' 5" 8+R + 5+ 9+! +3 + " ' 9+ B"8 ' +!+8 .' R +8 " 8 5" C 5+! .' 25R !+3 592!25 +! 8 58 8 @9+ 9+!' 9+6 52 '7+5"B+ 9+!+3 2!6 "' B1"! 2 ' 8 9 8 88 + 92 ' ' 928 814 ' 9+ 2 !24 8 8 @9"' 2!+ +81+5 2446 5" 5+! +3 ' 9+ B+592 8B " ' +D"4 " ' "' @"' 9"8 4+ 52B18 ' 2 3 24 9" .9 9+ 5" !"D+!86 3"+8 " ' "E326 !2.+ 8"' +!5+46 28 ' 3 3 ' 9+ 428 ' 3+523+ " ' 9+ + ++ 9 5+ !6 ' 8 8 44 2 ' 88 + "!' 3+72 + 9+ 2 !24 7+4 + ' " ' 9 B2 6 8 R +8C " 2746 92 ' 9+ 592!2+ +! 8 58 25R !+3 76 9+ 12!+ 8 2!+ ' 12! ' 2 ' 4+28 ' + .!2 +3 1" ' 9+ 9+!+3 6 " ' 9+ 59 43 ' 9 8 8 +8 1+5 2446 9+ D +@ ' !+.2!3 "' +D 4 !2 8 S 9+ 8 8 " ' 9+ 2 9+!8 8924 7+ D 8 +3 1" ' 9+ 59 43!+ T S 9+ 2 9+!8 92D+ +2 + ' 8" !.!21+8 2 3 9+ 59 43!+ 8 ++ 9 2!+ 8+ " ' +3.+ T "' 2 !24 2 ' 288 B1 " ' 8 9 8 92 ' 2B2!5A #:" "&1 2 !+ 59 2 !24 8 ' M$0==E $>Q<G ' + 3+2D"!+3 "' +J142 ' 76 ' 9+ +D"4 C " ' " ' 81+5 +8 +' 928 " 46 "' 8 11"8+ 92 ' 9+ + +5 8 " ' 8+ 2 3 3 8 8+ 1" ' 9+ 7"36 2 3 5 " 8 " ' 9+ 12!+ ' 2!+ !2 8B +3 ' 12! ' "' 9+ 59 43 ' @9"' ' ! ' 3+D+4"18 8 44 ! 9+!' ' 9+ 82B+ 3 !+5 " ' ' "!3+!' "' 92D+ 2 ' 2.+ 56 76 @9 59 ' 2 5"B12!2 D+46 8B244 !25 " ' " ' .+"4". 524 B+ +J !2"!3 2!6 592 .+8 ' 8 ! 5 !+ 2 3 52125 +8 B .9 ' 7+ 7!" .9 ' 27" ' 9 8 2B2!5A 5" 5+ D+3 9+ +D"4 " ' " ' 81+5 +8 "' 7+ 9+ " 5"B+ " ' 9+ 3 D 3 24 25 D +8 92 ' B2A+ 1 8 9 8 "!6 ' 9+ 9+!+3 6 " ' 2 8 "5A 8 9" .9 ' "' 7+ 4 A+ 9+ 5" 8 " ' " ' 2 2 " ' 2 1!"3 5 " ' 8 55+88 D+ + "! 8 ' 8 55+88 D+ .+ +!2 " 8 "' 3+D+4"1 2 82 8 25 "!6 @"!A .' "!.2 8B ' 92 ' 9+ 2 9+!8 259 +D+ ' 9+ 59 43!+ ' 92D+ 9! 8 ' 1" ' 9+B ' D"4 " ' 8 2 !+8 4 ' " /+ "! ' 2 3 8 5+ 9+ + "! 8 " ' 3 +!+ ' 3 C D 3 248 3 +!' 7" 9 ' + 8 6 2 3 3 !+5 "

9+ !' 59 43!+ ' 2!+' 7"! ' @ 9' 3 +!+ ' 592!25C +! 8 58' @9 59' 9+6' ' ! ' 3+D+4"1' 3 +!+ 46' "@ .' "' D2! + 6' ' 5 !5 B8 2 5+8' 2 3' ' + +!.6' 9 8' 81+5 +8' 2!+' 3 +!+ 2 +3' 2 3' @+' 92D+' 9+' D2! + 6' " ' 4 +' 8++ ' ' 9+' @"!43' "E326

2!@ ' #:" "& M$>#<E$>>QG 3+D+4"1+3' 2' +@' " " ' " ' 9+' B+ 9"3' " ' +D"4 " ' 6' 8 36C .' 9+' B+ 9"38' 76' @9 59' 7!++3+!8' 2 3' !8+!6C B+ ' B1!"D+' 9+' R 24 +8' " ' 2 B248' 2 3' 142 8' 3+!' 3"B+8 52 " ' 9+' " 3' 92 ' ' @28' 76' 7!++3 .' " 46' !"B' 9"8+' 92 ' 89"@+3' 9+' B"8 ' 3+8 !274+' R 24 +8' 2 3' 3+8 !"6 .' 9+' !+8 ' 9 8' 1!"5+88' 9+' 5244+3' 2! 5 24' 8+4+5 " ' ' 8' "' 7+' " +3' 92 ' 9+' R 24 +8' "!' @9 59' 9+' 8+4+5 +3' 3 D 3 248' 2!+' 59"8+ ' 2!+' " ' 25R !+3' 9+' 7!++3+!' 3"+8' " ' 3' ' +5+8C 82!6' "' !2 ' 2' 9"!8+' "' ! ' 28 +!' 92 ' ' @" 43' 2 !2446' ' "!3+!' "' .+' 2' 12!+ ' "!' 2' 7+ +!' 8 "5A' 2 9+!' 9+' 59""8+8' 2B" .' 244' 9 8' 9"!8+8' 9+' " +' 92 ' 8' 76' 2 !+' 28 +8 ' 9 8' ' 3+D+4"1 .' 9 8' B1!"D+3' 8 "5A' 9+' !+4 +8' " ' 592 5+' D2! 2 " 8' ' 2 !24' 81++3' !2 9+!' 92 ' " ' 9+' + +5 8' " ' !2 .

92 ' 2!@ ' 82@' ." .' " ' 3+!' 9+' 5" C !"4' " ' B2 ' 9+' 5" 5+ D+3' "' 7+' 2A .' 1425+' 3+!' 9+' 1!+88 !+' " ' 5"B1+ " ' ' 2 !+' 5+' 2 B248' 2 3' 142 8' ' 2' 8 2 +' " ' 2 !+' 592 5+' "' D2!6' !"B' +259' " 9+!' ' B7+!4+88' @268' 2 3' 8 5+' 9+!+' 8' 2 ' + "!B" 8' 4"88' " ' 4 +' 2B" .' 9+B' !"B' 5"B1+ " ' 9"8+' 92 ' + 3' "' 8 !D D+' 2 3' "' !+1!"3 5+' 9+ !' A 3' @ 44' 7+' " ' 9+' @9"4+' 9"8+' 7+8 ' 2321 +3' "' 8 !D D+' 9+' +8 ' 9+' 5" 8 2 ' D2! 2 " ' ' 2 ' 3 !+5 " 8' 2 3' 9+' 5" 8 2 ' +4 B 2 " ' " ' 9+' ' @ 44' ' B+' 7!+2A' 1' 2 6' 8 "5A' "' D2! + +8' +259' " ' @9 59' 928' 7+5"B+' R +' @+44' 2321 +3' "' 92 ' 81+5 5' + D !" B+ ' @9 59' 8' B"8 ' 2D2 4274+' "!' ' + 5+' 9+!+' @ 44' 7+' 3 +!+ 2 " ' " ' 81+5 +8' "' D2! + +8 ' 28' 9+8+' D2! + +8' 8+12!2 +' B"!+' 2 3' B"!+' @ 3+46' !"B' " 9+!8' 92 ' 81!2 .' !"B' 9+' 82B+' 12!+ 2.+' 9+6' + 3' B"!+' 2 3' B"!+' "' +D"4D+' "' 3 8 5 ' 81+5 +8

2!@ ' 42 3' B"8 ' 8 !+88' " ' +D"4 " ' 76' 2 !24' 8+4+5 " ' "1+!2 .' " ' 592 5+' D2! 2C " 8 ' 7 ' 9+' 3 3' " ' !+-+5 ' 9+' 3+2' 92 ' 9+!+' B .9 ' 7+' +D"4 " ' 76' 9+' 9+! 2 5+' " ' 9+' + +5 8' " ' 8+' 2 3' 3 8 8+' ' 9+' 5" !2!6 ' 9+' 255+1 +3' 9 8' 28' 2' .+ +' 25 "!' ' 9+' "! . ' " ' 81+5 +8 ' 9+' "44"@+!8' " ' 2!@ ' 92D+' 9"@+D+!' ' 8"B+' 528+8' !+ 8+3' "' 7+4 +D+' ' 9+' 9+! 2 5+' " ' 25R !+3' 592!25 +!8 ' 9"8+' @9"' 9"43' 9 8' D +@' @9 59' 1425+8' 9+' 7 !3+ ' " ' +J142 .' +D"4 " ' 24B"8 ' ' " ' R +' + !+46' 1" ' 2 !24' 8+4+5 " ' 92D+' 7++ ' 5244+3' +"E 2!@ 2 8' 9+ !'4+23+!' 8' . 8 ' + 8B2 ' !" +88"!' ' 9+' D+!8 6' " ' !+ C 7 !.' 8' 5" + " ' 92 ' 9+!+' 8' "' 9+! C 2 5+' " ' 25R !+3' 592!25 +!8' 2B" .' B 4 5+44 42!' 2 B248' 8' 728+3' " ' 9 8' 5" D 5 " ' 92 ' 9+' 1968 "4". 524' B+592 8B' " ' 9+!+3 6' 8' 8 59' 28' "' !+ 3+!' 9 8' !2 8B 88 " ' B1"88 74+' 9+' .+!B' !"B' @9 59' 9+' +@' 3 D 3 24' 81! .8' 8' 3 8 5 ' !"B' 9"8+' 7"36' 5+448' " ' 9+' 12!+

9+' B"3 52 " ' " ' @9 59' . D+8' ! 8+' "' 25R !+3' 592!25 +! 8 58' 92 ' 9+!+' +J 8 8' 2' B+592C 8B' 76' @9 59' 9+' 25R !+3' !2 8' " ' 9+' 7"36' 5+448' 52 ' 7+/ !2 81"! +3' 9!" .9' 9+' 7"36' 2 3' B23+' "' 4 + 5+' 9+' 592!25 +!' " ' 9+' .+!B' 5+44' 8' 255"!3 .' "' + 8B2 ' 5!+3 74+' "!+"D+!' ' 8' +5+882!6' "' 5" 8 ! 5 ' 2 ' 961" 9+ 524' +J142 2 " ' "!' 8 59' !2 8B 88 " ' 8 5+' 2' 52!+ 4' +J2B 2 " ' " ' 9+' 25 8' 89"@8' 92 ' 9+' 8 11"8+3' 25 ' " ' 9+! .' 25R !+3' 592!25 +! 8 58' 8' 2' B6 9 ' 44' 528+8' 92 ' 92D+' 7++ ' 9+43' "' 7+' 44 8 !2 " 8' " ' 9 8' ! " ' " 81+5 " ' "' 7+' + 9+!' !2 8' " ' 9+! +3' 7 ' !2 9+!' 25R !+3' 76' 9+' 59 43' "!' !2 8' " ' 25R !+3' 7 ' 9+! +3' 76' 9+' 12!+ ' 9+' 25 ' 8' 9+' B2 2 8' 9+' 59 43' 9+! 8' " 46' @92 ' 9+' 12!+ ' 9+! 8' 14 8' 8 59' D2! 2 " 8' 28' 592 5+' "!' 2' B J !+' " '74""3' + 38' "'1!"3 5+ 9+' D +@8' " ' + 8B2 ' !2 8+3' 1' 2' 9"8 ' " ' H "11" + 8' 28' @+44' 28' " ' 3+ + 3+!8 ' 9"8+' @9"' B2 2 ' 9+' .+ + +88' " ' 9+' 9+! 2 5+' " ' 25R !+3' 592!25 +!8' 92D+' 7++ ' 5244+3' 9+' +"E 2B2!5A 2 8' 9+6' 92D+' 3+D" +3' 9+B8+4D+8' "' 2' 8+2!59' "!' 528+8' 92 ' @" 43' 5" +8 2746' 1!"D+' 8 59' 9+! 2 5+' 1 " 8' 3 +!' 28' "' @9+ 9+!' 9+6' 92D+' 8 55++3+3' 9+' 528+' !+C 1"! +3' 76' !"@ E +R 2!3' " ' 9+' 9+! 2 5+' ' . +2' 1 .8' " ' +1 4+186' 92 ' "! . 2446') 22' 52 8+3' 76' B 42 " 8' 928' 7++ ' 1+!9218' 9+' B"8 ' 5" D 5 .' 8 2 5+' 92 ' 9+6' 92D+' " +!+3' 42 " 8' 2!+' 3+B" 8 !2746' " ' 9+! +3' "' +D 3+ 5+' +J 8 8' "' 8 11"! ' 9+' " " ' 92 ' 927 8' "!' 25R !+3' B+ 24' !2 8' 52 ' 7+5"B+' 9+!+3 2!6' / 9+!+' 9+' + +5 8' " ' 54 B2 +' ! " ' "!' B"3+' " ' 4 +' 2!+' 8"' .+ +!24' 28' "' 7+' 521274+' " ' 2 +5 .' 9+' .+!B' 28' @+44' 28' 9+' 7"36' 5+448' 9+!+' @+' B26' 8++B' "' 92D+' 8"B+' +D 3+ 5+' " ' @92 ' B .9 ' 7+' 2A+ ' "' 7+' 9+' 9+! 2 5+' " ' 25R !+3' !2 8' 7 ' 8 59' 528+8' 2!+' +@' 2 3' 9+' + +5 8' 2!+' !2 9+!' C 3+ +' !" +88"!' :2B+8' 592!25 +! I+3' 9 8' +D 3+ 5+' 28' S' 2' 7+. .2!46' 2!!26 T' ' 9+' " 9+!' 92 3' 9+' +"E 2B2!5A 2 8' 92D+' !2 8+3' 1' "' 25+' 9+' +"E 2!@ 2 8' @"' "!B 3274+' "7-+5C " 8' +' 8' 92 ' ' @+' !+-+5 ' 9+' 9+! 2 5+' " ' 25R !+3' 592!25 +! 8 58' @+' 92D+' 3 852!3+3' 9+' " 46' +44 . 74+' 255" ' " ' 9+' "! . ' " ' 9+' D2! 2 " 8' " ' 9+' 728 8' " ' @9 59' 9+' 1!" .!+88' " ' +D"4 " ' 8' B23+' 2 3' 92D+' 4+ ' " 46' 9+' B68 +! " 8' 592 5+' D2! 2 " ' 9+' " 9+!' 8' 92 ' 8 59' 84 .9 ' D2! 2 " 8' 28' "! . 2 +' 76' 592 5+' 52 ' 92!346' 7+' 8 11"8+3' "' . D+' 9+ !' 1"88+88"!' 2 6' 8 59' 8 78 2 24' 23D2 2.+' 9+' 8 ! ..4+' "!' +J 8 + 5+' 28' @ 44' + 274+' 9 B' "' 8 !D D+' @9+ ' " 9+!8' 1+! 89' ' 92 ' +D+ ' 9+!+' !+B2 8' "' S' 8 !D D24' " ' 9+' +8 T' 2 3' 9+ 5+' "' +D"4 "

9+' !8 ' " ' 9+8+' "7-+5 " 8' 928' 7++ ' B+ ' 76' 2' 5" +!E"7-+5 " ' ' 8' B2 2 +3' 92 ' 9+' 25R !+3' 592!25 +! 8 58' 8"' 2!' !"B' +JC 142 .'+D"4 " ' ' 9+' 1"@+!8' " '4 D .' 7+ .8' 2!+' 9+B8+4D+8' 728+3' " ' 9+!+3 2!6' 1"88 7 4 +8' " ' 3+D+4"1B+ ' 9+' 25R !+3' 592!25 +! 8 5' 52 " ' 7+' 8+3' "' +J142 ' 2' 1" + 24 6' "!' .!"@ 9' 1" ' @9 59' ' 8+4 ' 8' 728+3 ' 9+' E

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5!+28+ 1"@+!8 @9 59 +D"4 " 928 7!" .9 27" 52 " 9+ 7+ +J142 +3 76 9+ 8+8 " @9 59 9+8+ 1"@+!8 92D+ 7++ 1 7 " 46 76 2 9+!+ + 3+ 56 "!4 D . 88 + "+D2!6 "+ 3+D+4"1 +@1"88 7 4 +8 "!.!"@ 9 9 8 D +@ @ 44 7+ " +3 8 8 78 2 2446 255"!3 @ 9 9+ " " " 9+ !+42 " 89 1 7+ @++ 25R !+3 592!25 +! 8 58 2 3 9+!+3 2!6 1"@+!8 @9 59 @28 " 4 +3 +2!4 +! 9 8 2! 54+

9+ 8+5" 3 "7-+5 " 928 9!+2 + +3 9+ @9"4+ 2!@ 2 " " " +D"4 " 76 2 !24 8+4+5 " B26 7+ @+44 "+ " +" +.+ " 8 2 +B1 "+ +J142 9"@ 84 .9 592 5+ D2! 2 " 8 B .9 1!"D+ B"!+ 8+ 4 92 8 2 ' !8 2112!+ !" +88"!8 243@ 2 3 87"! B+! 52 2 3 "!.2 .42 3 92D+ 8 ..+8 +3 2 25 "!+ 92 9+6 92D+ 5244+3 "!.2 5 8+4+5 " 4 .9 592 5+ D2! 2 " 8 9+B8+4D+8 " "+ 8 . 52 5+ B26 9+8+ @! +!8 2 !B 7+ 2 728 8 "!+ 3+D+4"1B+ 9!" .9 +3 52 D+ 4 + 5+8 " 1+! +5 +3 927 8 @9 59 2!+ " 9+ .!+2 +8 23D2 2.+ 9+ "!.2 8B 8+4+5 8 28 @+!+ 9+8+ 2112!+ 46 8 . 52 25 "!8 8 +R 1B+ 3+D+4"18 9+B 76 8+ 4 9+6 7+5"B+ .+ +8" !5+8 " 8 !+ . 9 84 .9 + 3+ 56 "+ 7 43 2 +8 @" 43 !+8 4 8"+ B1+! +5 2 1!"3 5 92 9+ +..8 @" 43 2 4/" 1!" +5 " 2 3 9+ 81+5 +8 .2 "+ 23C D2 2.+ 9+ " 9+!+ 92 3 B .9 2 "!3 2 728 8 !"B @9 59 9!" .9 B 2 " 2 3 +JC 1+! + 5+ 9+ 7 !3 B .9 7 43 2 D+!6 82 +9"B+ "!+ 8 92 59+3 7!""3 9+ 84 .9 D2! 2 " @" 43 9 8 288 8 9+ 8 !D D24 " 8 1"88+88"! 8 78+R + .+ +!2 " 8 B .9 .!"@ .!+2 +! 2 3 9 8 9+ 4" .! 9+!+3 6 @" 43 .2 2 8 78 2 24 B1!"D+C B+ 8 .4 ." 2 3 B1!"D .' 9+ 84 .9 D2! 2 " 9+ 12 9 24" .' @9 59 8 9+!+3 6 89" 43 B1!"D+ 9 8 9+ 25R !+3 592!25 +! @9 4 8 " 9+! +3 @" 43 +D+! 9+4+88 3+ +!B +' 9+ 12 9@26 " B1!"D+B+ 9+! 2 5+

8 +D 3+ Y "+ 2 6 " +' 92 @92 +D+! @+ 826 27" 9+ 9+! 2 5+ " 25R !+3 592!25 +! 8 58 2 2 6 !2 +! !+42 D+46 D+!6 +@ " 9+B 2!+ 8" !2 8B +3 9+ D28 B288 " 9+ 25R 8 " 8 " 9+ 9 B2 12!+ 92D+ "V 7+ 25R !+3 76 9+ 59 43 2 . 2.+ B2 C +!8 3+248 D"52 " 24 8A 44 +J1+! + 5+ +259 .+ +!2 " B 8 .+ "! 8+4 @" 43 8++B 4 A+ 2 .!+2 B 8 "! +' 92 9+ 9+! 2 5+ " 25R !+3 592!25 +! 8 58 89" 43 " 92D+ 1!+C D2 4+3 B"!+ +J + 8 D+46 9+ " 9+! 92 3 2 4 4+ !+ 4+5 " @ 44 5" D 5+ 8 92 2 !+ 89 .' 8 " !"B 9 8 +286 B+ 9"3 " 892! .' 9+ " 5"B+ " 9+ 3+D+4"1B+ " !' 12!+ 8 928 7++ 7+ + 5+ !2 9+!' 92 9+ "11"8 + "!' @+ 2!+ 82D+3 !"B 9+ C 5 7 8 " 2 + "!B" 8 B7+!" 927 8 8+ 4 " !' 2 9+!8 7 8+4+88 "!' 2 1"8 D+ 3+ ! B+ " 8 2 3 " 927 8 8+4+88 "!' - !" 8 +D+ " 9"8+ 2 5+8 "!8 @9" "!B+3 9+B

9+ 1! 5+ " 92D .' 4+2! "!' " !8+4D+8 9+ D24 274+ 927 8 2 3 3+28 " " !' 12!+ 8 @+ .2 B B 6 !"B 9"8+ 92 @" 43 BC 12 !' " !' "@ + 5 + 56 9+ " +' 5" 8 3+!8 9+ !21 3 6 @ 9 @9 59 9+!+5+ 9 8 "!6 " B2 9+ B2 +!8 8 " 8 2 3 3+248 " 8"5 + 6 9RD+ 592 .+3 9+ " E 9+! 2 5+ " 25R !+3 592!25 +!8 7+5"B+8 9 8 B 3 C +D 2746 5"!!+42 +3 @ 9 1!".!+88 D+ +88

d

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X 19!28+ 2114 +3 "' 2 81+5 24 B+ 9"3 "!' 3+D 5+ 8+3 +259 .!+23C .' "' 6" .' 7+. +!8 12! 5 42!46 "!+ . 59 4C 3!+ @ 9 4 4+ 5"B1!+9+ 8 " " "!24 .4 89 9+ 59 43 5" D+! 8 9+ 1! " " 9+ 2 3 " 2 19"C + 5 868 +B "!' 3 25! 5 B2!A8 2 3 9+ 25 8 81"A+ .4 89 @ 9 "!' @ 9" 9+ 2 3 " 2 19"C B+2 . 9+ 3+D 5+ 928 B2 6 D2! 2 " 8 244 + 3+3 "' 2D" 3 2 B+!+ B+592 524 !+23 ." 8" 38 @ 9" B+2 . +" 9+ B "8 !+R + D2! 2 " 8 8 "!' 9+ +259+!' "' @! + 2 5" B B2 3 1" 9+ 7425A7"2!3 @9 59 8 !+23 8 4+ 46 76 9+ 59 43!+ " " +" " @9"B 8 3+8 .C 2 +3 "' 52!!6 " 9+ 5"B B2 3 9+ +5+8C 8 6 " 8"B+ 25 " 28 9+ " 5"B+ " 9+ !+23C ." "5 8+8 2 + " " B+2 .' !2 9+!' 92 " B+!+ D 8 24 "!B "!' 1!" 5 2 " 3 !+E (+248 2 " 5+ 2 6 2 4 !+ " 9+ 59 43 "' .+ 9+ 9" .9 " 9+ 8+ + 5+ +88" 8 @9+!+ 25 " @"!A 8 3"B 2 2!+ !+R + 46 5244+3 S 25 " 4+88" 8 T

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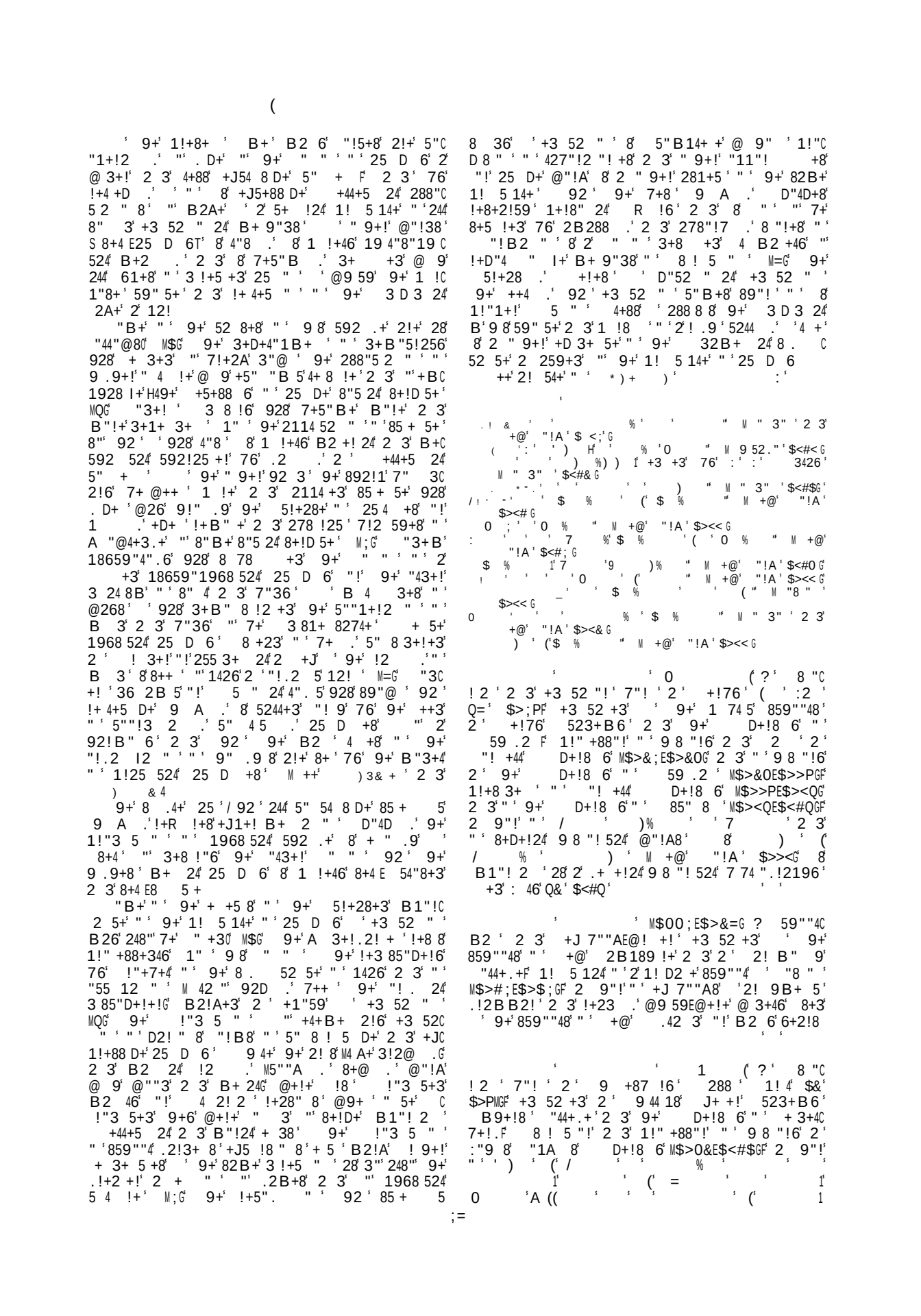
9+ !+8 4 +3 52 " @28 "" . D+ 9 .9+!' +3 52 " 2 " +E8 3+3 3 !+5 " 78 !25 8 3 +8 8 5+ 9+6 D"4D+ 2 B B B' " "D+! 25 " @+!+ !+.2!3+3 28 9+ 211!"1! 2 + B2C +! 24 " 8+4 E25 D 6 @ .'" "' 9+ 4 + 5+ " ! 8 " 4+ 1 !+ 25 D 6 @28 3+ +3 @ 9 9+ "1+!2 " " 1 !+ !+28" 2 2 1!"5+88 7+. C .2 3 + 3 .+J54 8 D+46 9+ B 3 2 3 +J1!+88+3 @9"446 4". 524 +!B8 9 8 61+ " 25 D 6 592!25 +! I+3 4 7+!24 "!' !++ +3 52C " @9 59 @28 9+ 5" !28 +3 @ 9 1!" +8C 8 " 24 2 3 B+592 524 +3 52 " 28 5" 5+! +3 @ 9 2! 8 92 ""A + +5 8"B+ B"3 52 " " 9+ 7"36 M8 59 28 B+3 5 +6 "!' +J +! 24 "7-+5 8 8 59 28 9+ + 2 3 9+ 3 8 ! 24 2! 8 9 8 4"@+!' M728+6 61+ " 25 D 6 2 3 9+ +3 52 " 5" 5+! +3 @ 9 923 " " 3"" @ 9 B 3 8 +.! 6 2 3 1 ! 6 7 @ 9 B 3 28 2 +5 +3 76 @2 "!' 425A ? 211+ + 2 3 +J +! 24 1968 524 5 !5 B8 2 5+8

4 9" .9 9 8 3 24 8 5 2 3 +J54 8 D+46 E +44+5 24 8 5 19 4"8"196 8 !2!+46 "1+ 46 1!"C +88+3 "E326 928 923 .!+2 9 8 "! 5 C 4 + 5+ B 59 " @9 59 8 4 8 !D D+8 BC 7"3 +3 9+ 859"428 5 9+"!6 " 9+ 8 C 1+! "! 6 " 9+ 5" +B142 D+ "" 9+ 1!25 524 4 + @28 !+D D+3 2 " 9+!' "! B 9+ 9 C B2 8B " 9+ + 2 882 5+ 2 3 38 2 +59"" "E326 9+ 288 B1 " 92 2 4 1!" +8C 8 " 24 2 3 +D+ 8+ 4 +3 52 " B 8 7+ 44 7+!24 2 3 " 5 4 !24 9 4+ 9+ 859""4 1!25C 5+8 R +8 " @+!+ 3 + " " 9+ 9+"!6 7 "" 8"5 24 5" 3 " 8 @9 59 1 9+ 8 2 B1 " 9+ . "74+ 2 3 B+ 24 1" 244 +5" "B 5 5" 5+! 8 6+ 9+ 9+"!6 .2D+ 2 5" D+ + "!B 42 " 2 3 8++B .- 8 52 " "! 9+ 1!25 5+ " 3 D"!5 .+3 52 " "! 5 4 !+ 2 3 "!D"52 " !"B +259" 9+!



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3 D 3 24 3"+8 " 255"B B"32 + 9 B8+4 " 9 8 + D !" B+ 7 2A+8 9+ 2 D+ B"3 6C . " "" B2A+ "D+! "" 255"!3 @ 9 9 8 "@ 3+8 !+8 2 3 1 !1"8+8 46 @9+ 9+ + D !" C B+ 3+D+4"18 76 9+ 25 D+ 2 D+ 2 3 142 C . " " 3 D 3 248 8 1!".!+88 8+5 !+3 44 D+ " 2 3 3 85"D+!6 2!+ 528+8 " 25 D+ 2321 2 "

1+ 5+!L8 4 + 5+ 8 42!.+46 !+81" 8 74+ "! 9+ 1"1 42!B 85" 5+1 " 76 @9 59 7" 9 +3 C 52 " 2 3 +D"4 " 2!+ 5" 8 ! +3 28 9+ B"43 . " 14 274+ 2 3 1288 D+ "!.2 5 7+ .8 "2.!++B+ @ 9 J+3 2 3 8 2 5 + D !" . 5" 3 " 8 9 8 D +@ 4+238 "" 2 1+!D+!8 " 1!25 524 2 3 9+"!+ 524 " +3 52 " E 8 5+ B2A+8 8 2 B 9+ 255"B B"32 " " 3 D 3 248 "" 9+ +J 8 . 61+ "8"5 24 1"4 6 2 3 5 8 "B8 2 B+ 9"3 @9 59 B26 !2 "44"@+!8 7 " 4+23+!8 "" 2D" 3 9 8 +!!"! 8 +5+882!6 "" !+24 I+ 92 2321 2 " 8 2 528+ " 5" !"4 :" "& D"4D . 9+ 8 7"!3 2 " " 9+ + C D !" B+ " "" 9+ 4 + 5 " 8 " 3 D 3 248 9+ "! 9 B+! 52 3 2 8 255"B B"32 +3 9+B8+4D+8 "" 9+ ! 8 !!" 3 .8 " " ! +8 +! 142 8 2 3 3+8+! 8 2 3 9+ !+8 4 @28 2 4"@ 2 3 1!+52! " 8 5 4 !+ D 4 I+3 B2 +B14"68 B .!2 " B259 +!6 B+2 8 " !2 81"! 2 " 2 3 5"B B 52 " F 2 3 76 2321 .9+8+ 82B+ 8 !! 3 .8 "" 9 8 "@ + 38 5" !"48 9+ + D !" B+ 8 +23 " 92D . 9 8 3+D+4"1B+ 5" !"44+3 76 +!+ 4 +8 9+ 3 +!+ 5+ 7+ @++ 8 2 " 2!6 2 3 1!".!+8C 8 D+ 8"5 + +8 7+ @++ 5 D 4 I2 " 2 3 82D2.+!6 7+ @++ 9 .9+! 2 3 4"@+! "!B8 " 2 B24 4 + M ++ 7+8 3+8 ++ ' !)2 3 9+ !+ +!+ 5+8 9+!+ . D+ 1 &*)2 3 *) +) 4 :

"4". 524 321 2 " ? +8 3+8 8 .+ +!24 19 4"8"19 524 2 3 8"5 24 8 . 52 5+ 9+ +!B S 2321 2 " T 928 3+ + 7 "4". 524 2 3 8+ C 8"!6 5" " 2 " 8 92 92D+ 8 . 52 5+ +3 C 52 " 2446

"4". 52446 9+ +!B !+ +!8 " 9+ 25 92 +D+!6 "!.2 8BE + 38 "" 3+!.""9!" .9 2 !24 8+4+5 " "!" 3 D 3 24 B"3 52 " 2 8 55+88 " "592 .+8 @9+!+76 8 5 " 8 2!+ 3+!+3 B"!+ 92!B" " 8 @ 9 9+ 3+B2 38 " 9+ + D !" B+ 9 8 142 8 @9 59 4 D+ 2 2! 3 !+. " 2321 9+B8+4D+8 "" 9+ + C D !" B+ 76 3+D+4"1 .!.2 8 "!" 9+ !+ + C " " " B" 8 !+ B248 92 4 D+ 2 2 5"43 54 B2 + 3+D+4"1 5"D+! .8 @9 59 1!" +5 9+B 2.2 8 9+ 5"43 9+ +!B 928 7++ +B14"6+3 5" +5 " @ 9 B+ 24 3+D+4"1B+ " 3 52 + 92 9+ 1!"5+88+8 2!+ B"!+ ,) 28 B+2 8 " .2 3 D 3 24 " 9+ + D !" B+ 92 B+!+ "!.2 5 592 .+8 + 8"!6 321 2 " "55 !8 @9+ 2 6 "!.2 " 9+ 7"36 8 25 +3 1" 76 +J +! 24 + +!.6 @9 59 9+ 3+!."+8 2 592 .+ 8 59 92 8 78+R + 1!"5+88+8 92 "!.2 89"@ 9+ + +5 " 9+ +2!4 +!+J5 2 " 9 8 8+81+5 2446 ! + " 9+ "!.2 8 " 8+ 8+ 9+ 9+ +6+ 928 7++ +J1"8+3 "4 .9 "!2 B+ 8 4+88 8+ 8 E

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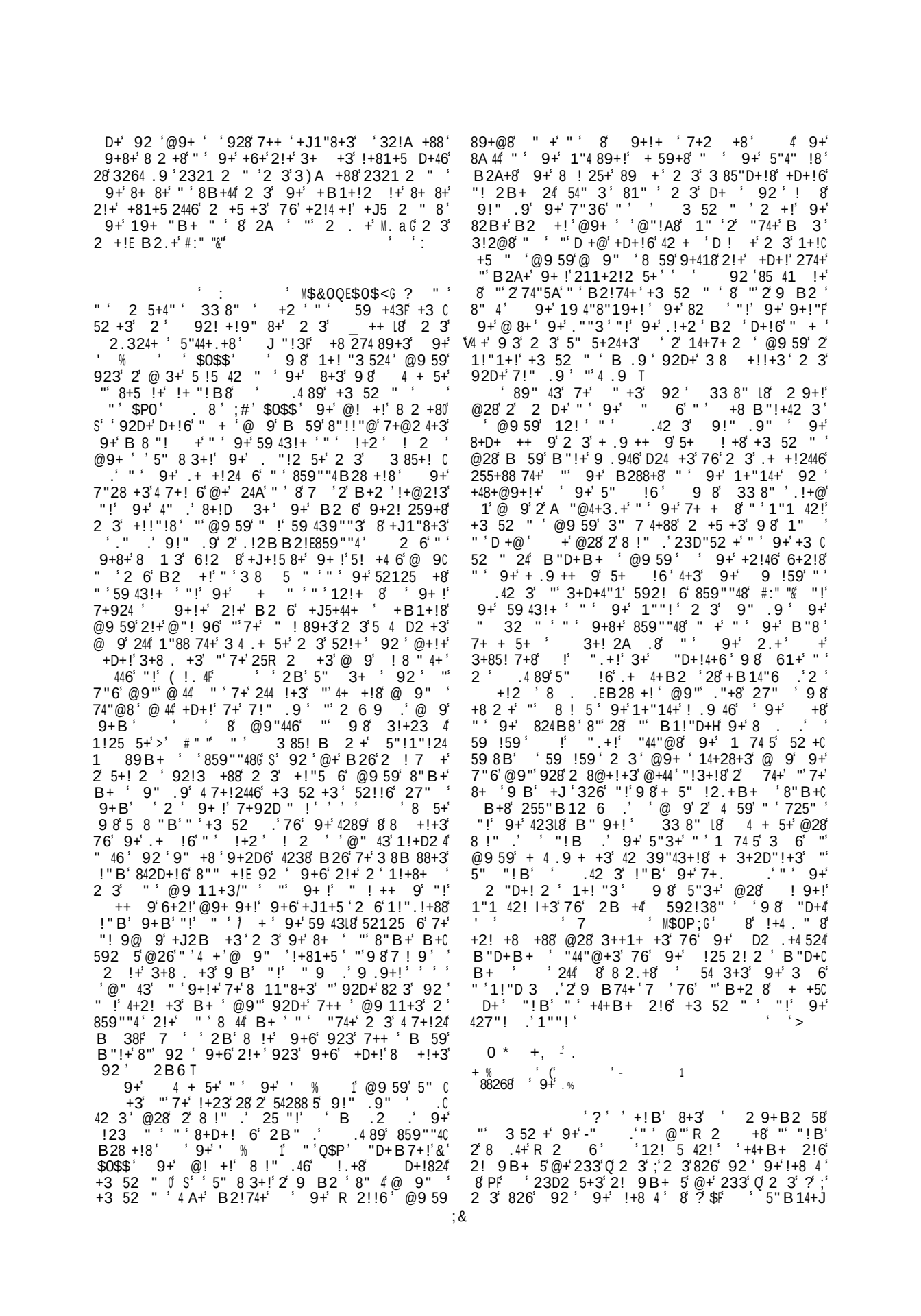

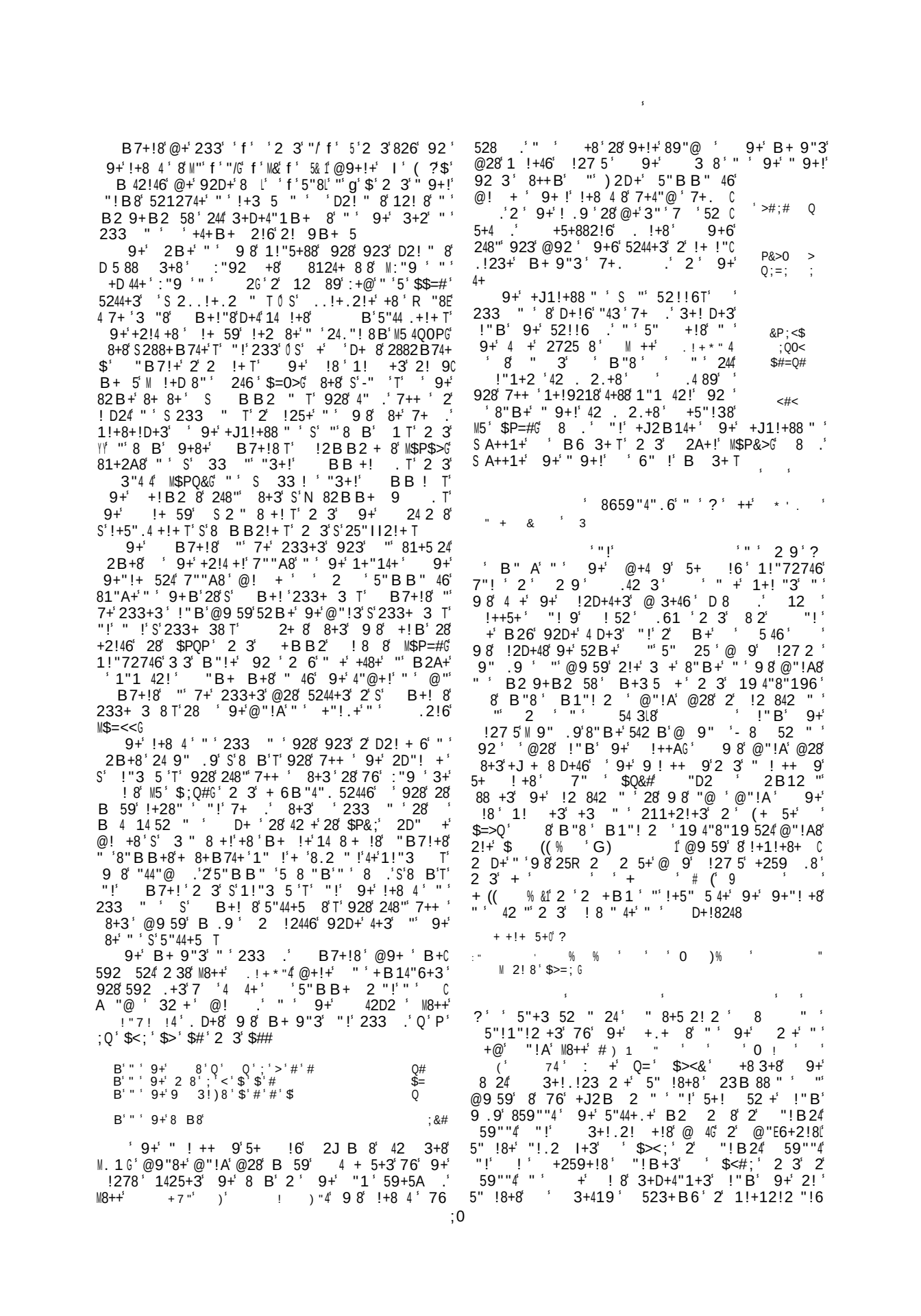

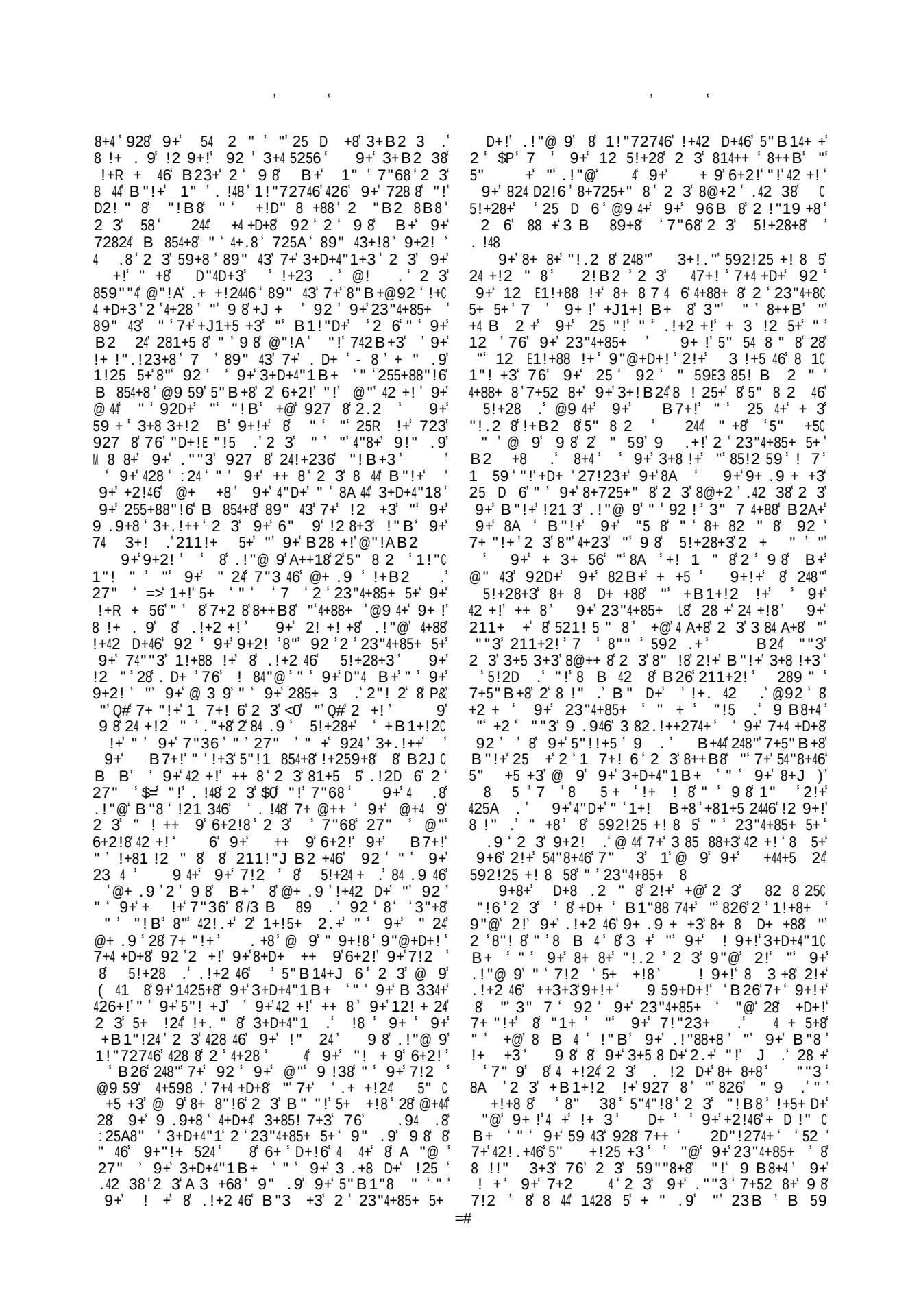

B"3 52 " ' + 5+' @+' 8"' " + ' 8++' ' 9 .9' 859""48' !2 8 "!B2 " 8' "' ' 59 43!+ ' !"B' 1""!' 9"B+8'@9"'92D+'5"B+' 3+!' 9+' 4 + 5+'"'8"B+' +259+!' "!' 5"B!23+' @ 9' 7+ +!' 8+8 9+ 5' "!' 96. + 5' 8 2 32!38' R 2446'@+' " + ' 8++' 2' 1+!D+! +3' 28 +' 81!+23' 9!" .9' 2' 859""4' "!' 23"4+85+ 5+' 8' 1!++B + 46' 9+' B+' "' 238' "' 1 !+46' 2! 5 2f 8"5 2f - 3.B+ 8' " '+D+!6 9 .' '4 +' !"B'5""A .'2'7++ 8 +2A'"!'@+2! .'2' +' "' !+23 .'2 3'1 5 !+8

8659"4". 52f 2 3' "5 "4". 524'?' 9+'!21 3' .!"@ 9' " ' 9+' 7"36' 24!+236' !" .946' 3 52 +3' 8' 12!244+4+3' 76' 2' 8 B 42!46' !21 3' 18659 5' .!"@ 9' @9 59' 1+!9218' B2 +8 8' 8+4' B"8' 592!25 +! 8 52446' ' 24 +!2 " 8' "' B""38' 2 3' +81+5 2446' '2'9+ .9 + +3' 8+ 8+' " ' 8+4' 9+' 23"4+85+ '4" .8' "!'+J5 +B+ '5" !28 ' B"D+C B+ ' 18659 52446' - 8 ' 28' 9 8' 7"36' 4" .8' "!' +J+!5 8+' 2 3' + 8 " 8' " ' 8 +23' " '2'8 +236' + "! ' 9+' + 38' "' 81 ! ' 1+! "38' " ' + 8+' @"!A' 7+ .' "44"@+3' 76' 5"B 14+ +' 34+ +88' @ 9' 4" .' 9" !8' " ' 84++1' ""38' ! 4+' 9+' 6" 9' ' 3+-+5 " '8"' 3++1' 28' "' 8 . .+8' .+ +' B+42 C 59"4 2' 7+ .' "44"@+3' 76' +R 2446' .!+2' +42 " ' 9" .9 8' " '8 5 3+' 2!+' 5"B B" '7 '24 +! 2 +' @ 9' 3!+2B8' " ' .!+2 +88' " 9' 9+8+' 2!+' 3" 7 +346' B" D2 +3' 76' 9+' 9 .946' 5!+28+3' 8+ 8+' " ' 8+4' @9 59' 8' 8+4' 1 89+3' "' 9+' "!+.!" 3' 76' 9+' B2 6' 8+ 82 " 8' 255"B 12 6C .' 9+' 7"3 46'.!"@ 9' "' 5" 5+ '2 3' 9 B 4 6' ' 9+ !' B"8' +J2. .+!2 +3' "!B8' B 26' 7+' 8++ ' ' 23"4+85+ 5+' 28' @+44' 28' 2 ') ' 1!"1!+' @9 59' 89"@8' 8+4' ' .!+2' 8+ 8 D+ +88' "' 8 4 8' 44' 9+' 8"5 2f 8 5 8' 5"B+' "' 9+' "!+' 2 3' 9+' 6" 9' 24 +! 2 +8' !"B' +J !+B+' 3 D 3 2 " ' "' B+!+' 842D 89 +88' ' "44"@ .' 9 8' B2 +8f !"B' R J" 5' .+ +!"8 6' "' 8+4 89 +88f !"B' 9+' 9 .9+8' 3+248' " ' 8"5 2f 8+4 E825! 5+' "' 278 !3' " " 8' '9 8' !.9 8' 9+'3++1+8'2 3' B"8' 2!E !+259 .' 24 +!2 " ' 8' 2 !2446' ' 9+' ++4 .8' "@2!3' 9+' "11"8 +' 8+J' @9 59' 1!"72746' 8' !+81" 8 74+' "!' B2 6' " ' 9+' " 9+!' 24 +!2 " 8' " ' 7" 9' ++4 .' 2 3' 9" .9 ' " '"!3 2! 46' !+5".C I+3' 28' 8+J 24' ' 9+' +2!46' ++ 8' B2 6' 8 3+ 8' 7+4 +D+' 92' 9+!+' 8' !8' 2' + 3+ 56' 7+ @++ ' 9+' 8+J+8' "' @ 93!2@' !"B' +259' " 9+!!8 5"B 12 6' 9" .9' 9 8' 9+"!6' 8 44' 425A8' 2 6' 23+C R 2 +'5" !B2 " ' 9+!+'3"+8 '9"@+D+!'8++B' "' 7+' 2 '4+28 ' 2' 1+! "3' @9+ '7" 9' 7"68' 2 3' .!48' 5"B 142 ' " ' 9+' " 9+!' 8+J' 9+' . !48' " ' 9+' B285 4 +' 5"2!8+ +88' 2 3' !" .9 +88' 9+' 7"68' " ' 9+' +B +' 8" +88' 2 3' ""4 89 +88' "4E' 4"@ .' 9 8' 2' 27" ' $P' 6+2!8' 9+' "11"8 +' 8+J' 7+5"B+8' +J5+88 D+46' 2 !25 D+' 8"' 92' ' 8' 9 .946' 1!"7274+' 92' 2' 9 8' 1+! "3' 9+' 3+8 !+' "' 211+2!' 2 !25 D+' "' 9+' "11"8 +' 8+J' 8' 2' BC 1"! 2 ' B" D2 .' 4 + 5+' ' 9+' 23"4+85+ ' 9 8' 8' " ' 5" !8+' B 59' 5"D+!+3' "' 9+' 6" 9!8 "@ ' 5" 85 " 8 +88' 2 3' 8' " + ' 9+' 428' 9 .' 9+' @" 43' @ 44 .46' 23B ' ' 7"68' ' B2 +8 8' 8+4 '+81+5 2446' ' 9+' 89"@ .E" ' 8 5 '@9 59' 8++B8' +81+5 2446' 8 B 42 +3' 76' 9+' 1!+8+ 5+' " ' . !48' " 9' . !48' 2 3' 7"68' 3+D+4"1' 1!" " 5+3' 28 +8' @ 9' !+.2!3' "' +6+8' 92 !' D" 5+' ++ 9' + 5' !48' 9" .9' 9+6' 3"' 89"@' " ' + 3

B"!+' "' 9+' 3+D+4"1B+ ' " '!+8+!D+8' 2A .' 9+' !34+' " ' - 3.+8' "!' 59""8+!8' " ' 9"8+' @9"' 14+28+' 9+B ' 9 8' 2D"! .' 9+' 8+4+5 " ' " '8"B+' B2 46' 592!25 +! 8 58' 2 3' 9+' 2 !"196' " ' " 9+!8' 2 3' 8"/ 2446' 8921 .' 9+' 6" 9' "' 9+ !' 3+8 !+8' 9+' @9"4+' 1!"5+88' " ' 8+4+5 " ' 2 3' B2 .' "!B 2446' !+259+8' 2' 54 B2J' 7+ @++ ' Q# 2 3' QP' "!' @"B+ ' 2 3' 1+!9218' D+' 6+2!8' 42 +!' "!' B+ ' @9+ ' @92' 2 ' 52448' 7 4 6' "!' 9+' B2!! 2.+C 274+' 2.+' 8' 2 2 +3

' 2' 9+' 82B+' B+' 92' 9+' "11"8 +' 8+J' 7+5"B+8' 8"' 2 !25 D+' ! + 389 1' 2 3' 9+!"' @"!C 89 1' 248"' 3++1+ ' 2 3' 9+' 8"5 2f 8 5' 8' + 42!.+3' ' 24f 3 !+5 " 8' + "!+' 1 7+85+ 5+' .2B+8' 2 3' 14268' 2!+' 42!.+46' 5"B 1+ D+F' 2 +!' ' +2B' @"!A' 8' 9+' B"8' B2!A+3' 592!25 +! 8 5' 2 3' @ 9' ' 9+' .2 .' 2 3' 9+' 54 7' 211+2!' 9 4+' 9+' 6" 9' 8' +D+' B"!+' +." 8 5' 92' 7+ "!+' @9 4+' 9+' 8' +J5+88 D+46' 8+4 E5" 85 " 8' 2 3' 1+!9218' 2..!+88 D+' "@2!3' 9+' "11"8 +' 8+J' 9+' 248"' 4268' 28 3+' 9 8' 1+!8" 2f 4 A+8' 2 3E 3 84 A+8' "' @"!A' @ 9' 9 8' +2B' 2 3' 9 8' 859""4' 2 3' 23"1 8' 24B"8' 842D 8946' 9+' 238' 2 3' ! 448' 3 5 2 +3' 76' 9"8+' @9"B' 7+' +4+5 8' 28' 9 8' "@' 3+D+4"18' 1! 3+' ' 9 8' 2B 46' 54288' 5 6' 2 3' 2 " ' 2 3' " ' " 46' 5 D 5' 2 3' 2 " 2f 12 ! "C 8B' 52 ' 7+' B"8 ' + +5 D+46' 2 .9 ' 7 ' 248"' 4"D+' "!' 9 B2 6

4"8+46' 5" +5 +3' @ 9' 9+' 8"5 2f 8 5' 8' 9+' !+4 ." 8' 8 5' !"B' 9+' +2!4 +8' B+8' 9+' + !2 5+' "' 23 4'4 +' 928' 7++ ' B2!A+3' 76' ! +8' 2 3' 5+!+B" +8' 3+8 . +W:' "' +8' 9+' B+ 4+' " ' 9+' 23"4+85+ ' 2 3' "' 1!+12!+' 9 B' "!' 9+' 3 +8' "' 4 +' B" .' 82D2.+' 1+"14+8' 9+8+' 2!+' 8 2446' 8+D+!+' +8 8' "' 9+' 1+@+!' "' + 3 !+' 12 ' 2 3' "D+!5"B+' +2!' ' !++5+' 9+' 7"6' @28' 1 ' 9!" .9' 2' !2 .' " ' 6+2!8' ' 8+!D .' 9+' 8 2 +' 2 3' ' "B+' 9+' 82B+' @28' ! +' 9+' B+3 +D2f 6" 9' " ' "74+' 3+85+ ' !"B' $=' "' Q$' 8+!D+3' 28' 8R !+' 2 3' 2' Q$' @28' A .9 +3' 2 ' 9+' + 3' " ' 4" .' 5+!+B" +8' " ' 28 .' 2 3' @2 59 .' 9+' :+@8' 248"' 923' 2 3' 92D+' 2' 52!+ 4f !2 .' "!' 23"4+85+ 8' 2 3' 2' ! 24f 8+3' @9+ ' 9+' 7"6' 288 B+8' !+81" 8 7 4 6' "!' 9 8' "@ '25 8X B" .' B"3+! ' 9! 8 2 ' 2 " 8' 9+8+' ! +8' 2!+' 1+!1+ 2 +3' " 46' '5" !B2 " ' @9 59' 8 2446' "55 !8' 2 '7+ @++ ' $Q' 2 3' $P' 6+2!8' 2 3' 928' 288 B+3' 2' @9" 6' !+4 ." 8' 592!25 +!' 9+' + 42!.+B+ ' " ' 9+' 8"5 2f 8+ 8+' "55 !! .' 2 ' 23"4+85+ 5+' 8' +D 2746' 255"B 12 +3' 76' 2' 3++1+ .' " ' 9+' B"!24' 2 3' !+4 ." 8' 2 !+8' 2' R +8 " .' " ' " +L8' !+42 " 8' " ' " 46' "' 8"5 + 6' 7 ' "' 9+' D+!8+' 8+4' 2 3' 8' 2f 2 8+' 9+' !!+4 ." 8' 23"4+85+ ' 8' 27 "!B 24' 9+' 12! 5 42!' "!B' @9 59' 9 8' +@46' 2@2A+ +3' 8 5' @ 44' 2A+' @ 44' 42!.+46' 3+1+ 3' 1" ' 9 8')' 1' 2 3' 9+' 2.+' " ' 5 4B 2 " ' 248"' D2! +8' 5" 8 3+!2746' "8' 2 9"! +8' 2.!++' 9"@C +D+!' 92' 7+ @++ ' $& 2 3' $0' 9+' 42!.+8' B7+!' " ' 5" D+!8 " 8' 8' !+5"!3+3' "!' 7"68' 2 3' 2' 6+2!' "!' @"' 6" .+!' "!' . !48' 9+!+' 8' 8 4f 8"B+' 5+! 2 6' ' 9+' 5 !D+8' 7 ' ' 8++B8' 1!"7274+' 92' 9 8' 1+! "3' 8' "44"@+3' 76' " +' " ' 725A84 3 .' 2 3' 92' 2' Q# +!+8' ' !+4 ." ' 2.2 ' 5 4B 2 +8' 9 8' B+' " ' 2

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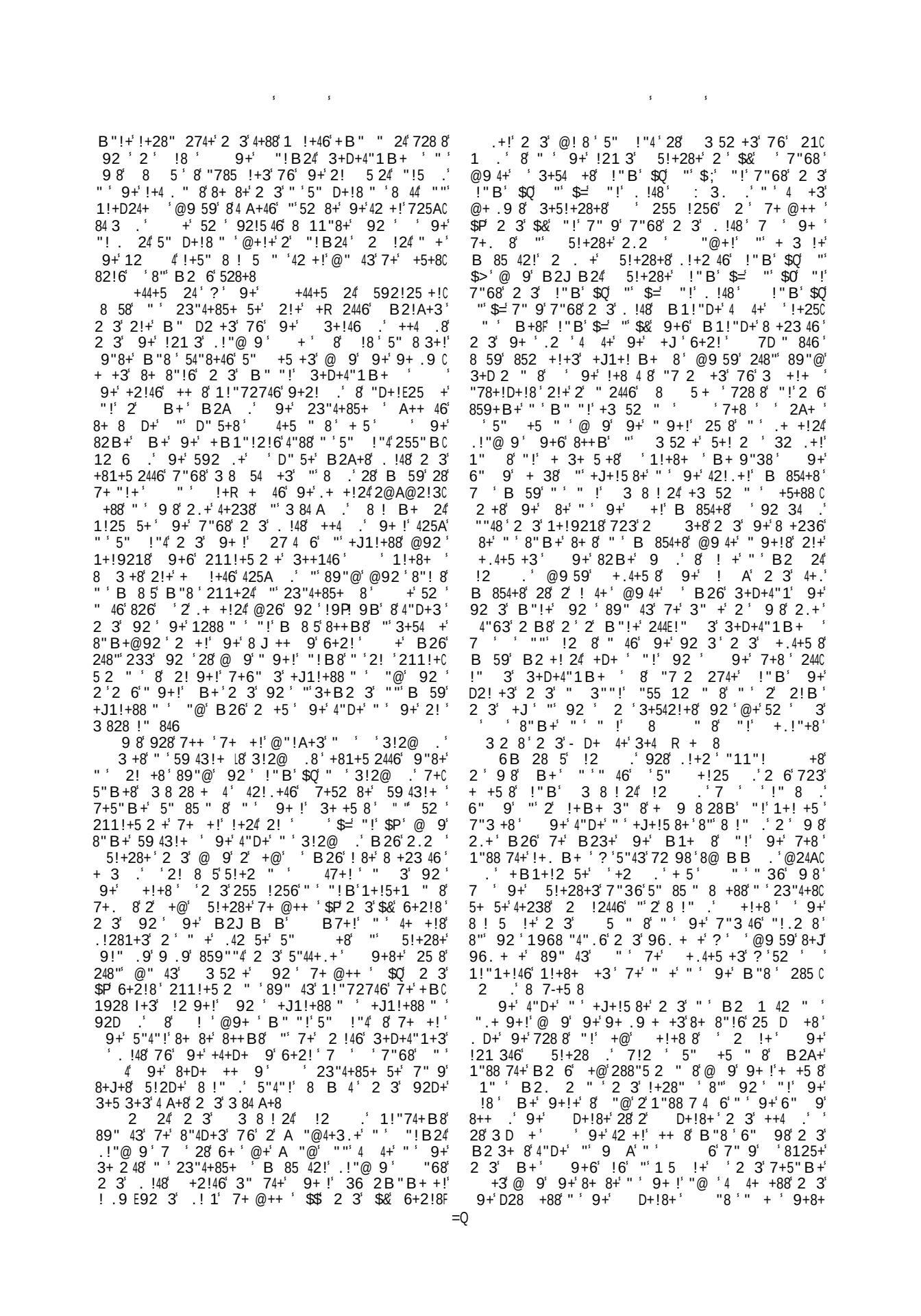

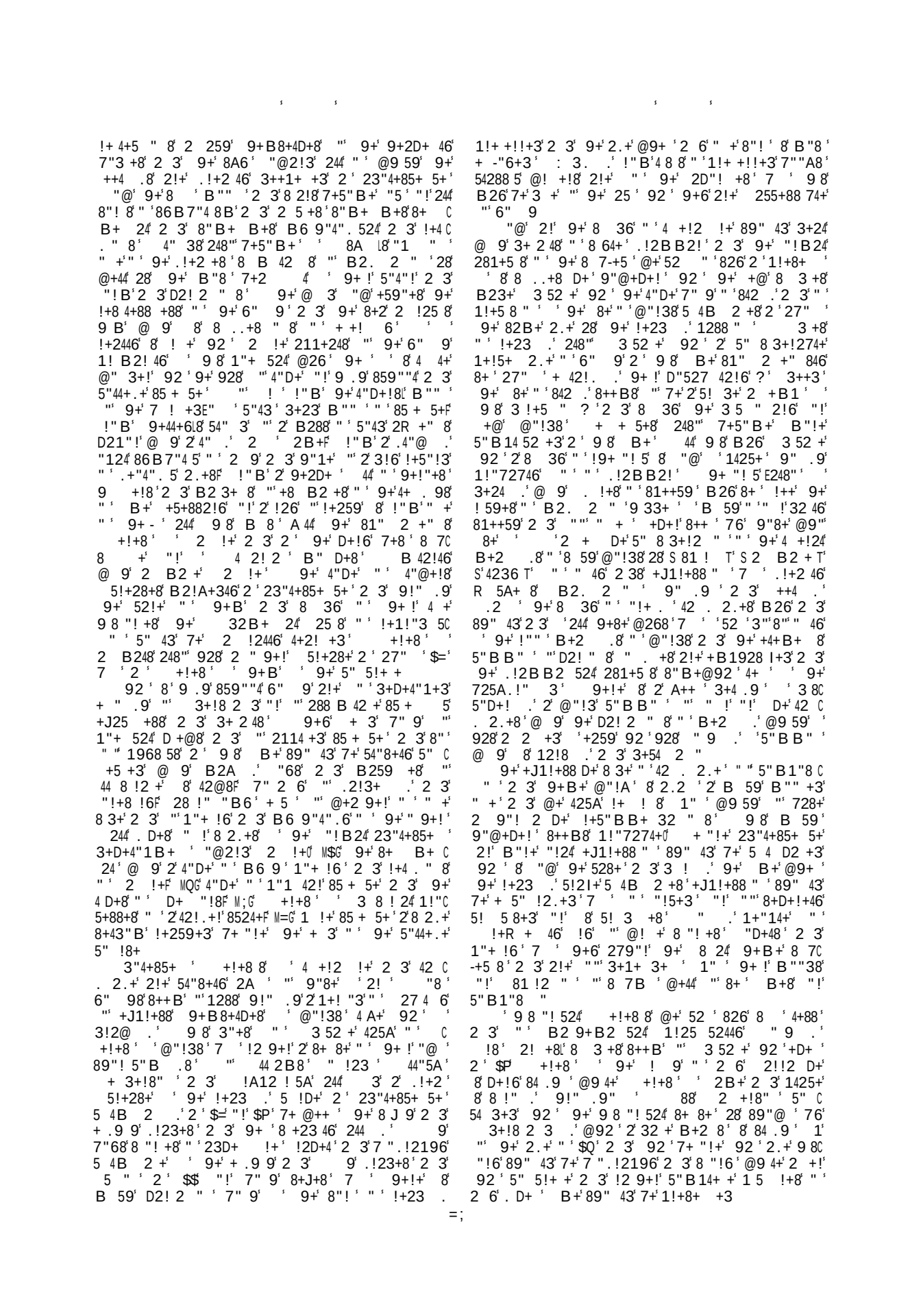

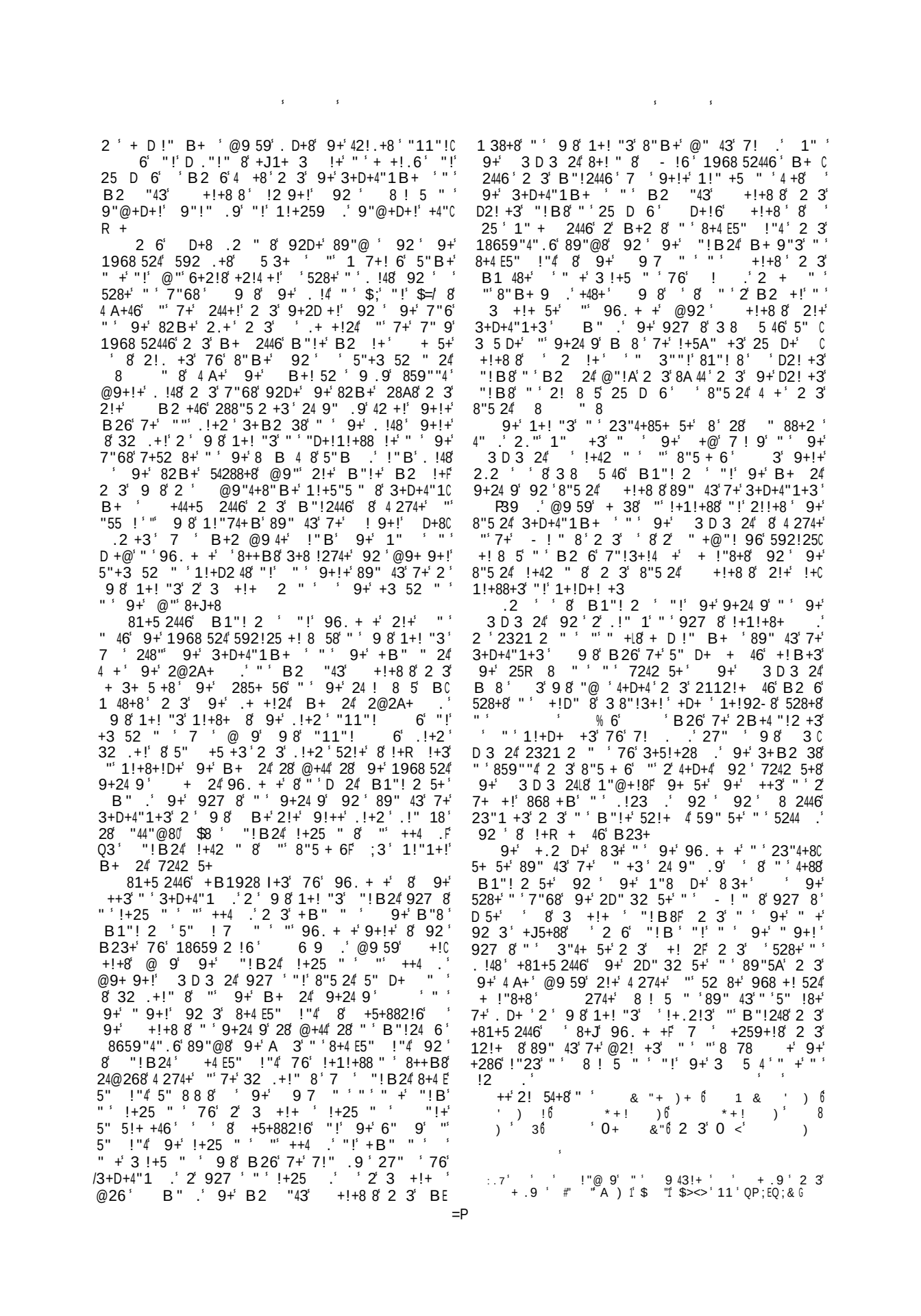

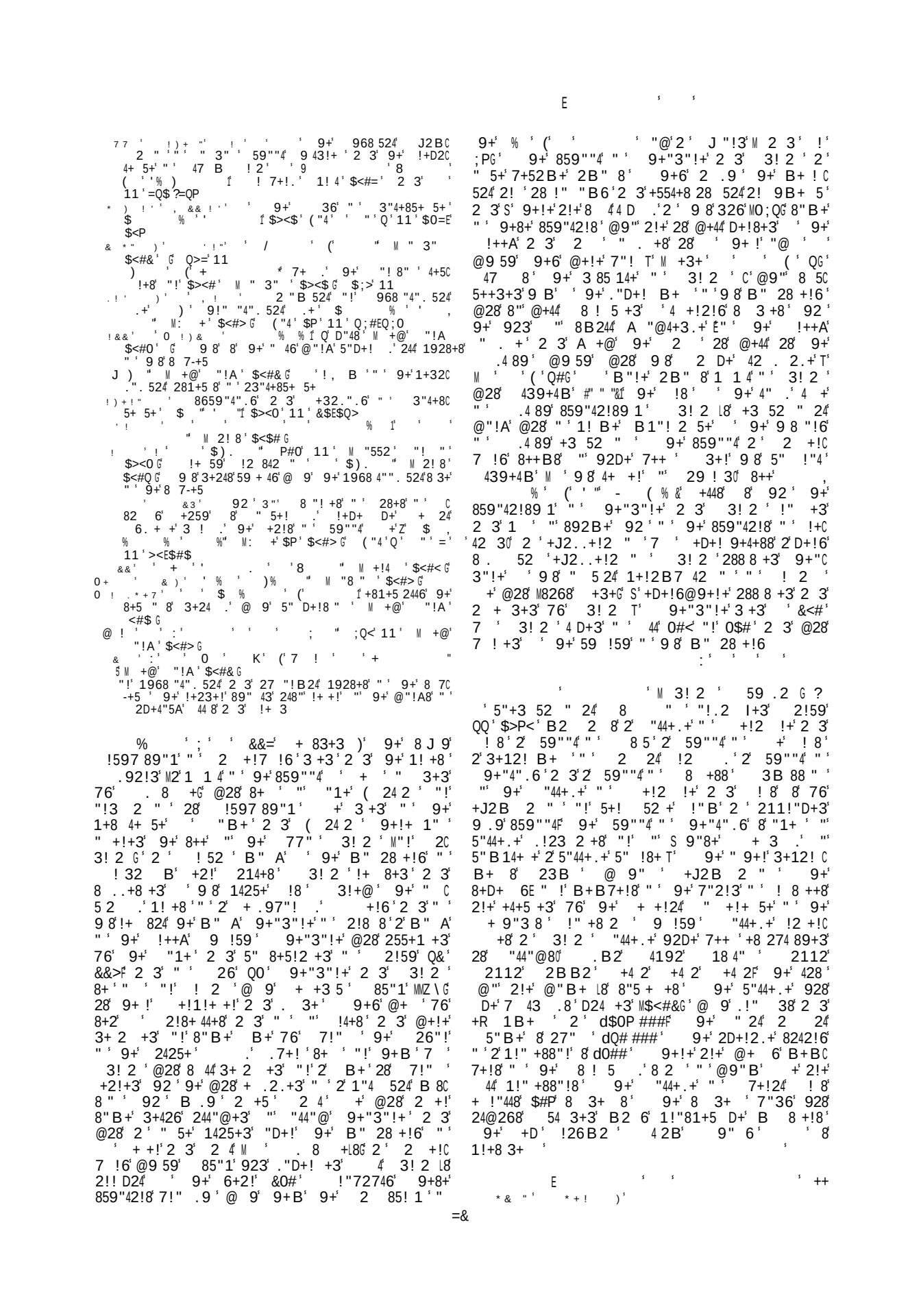

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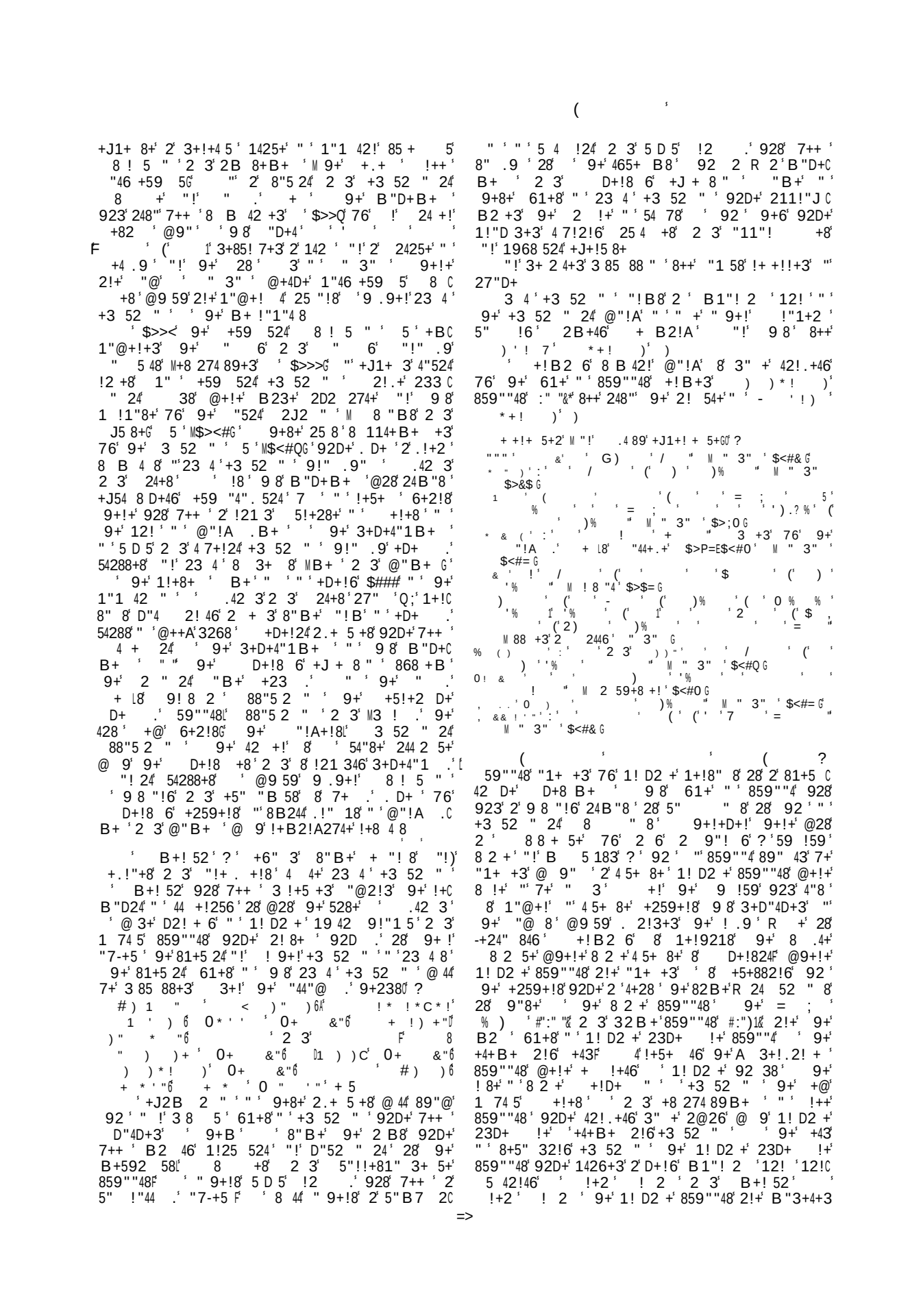

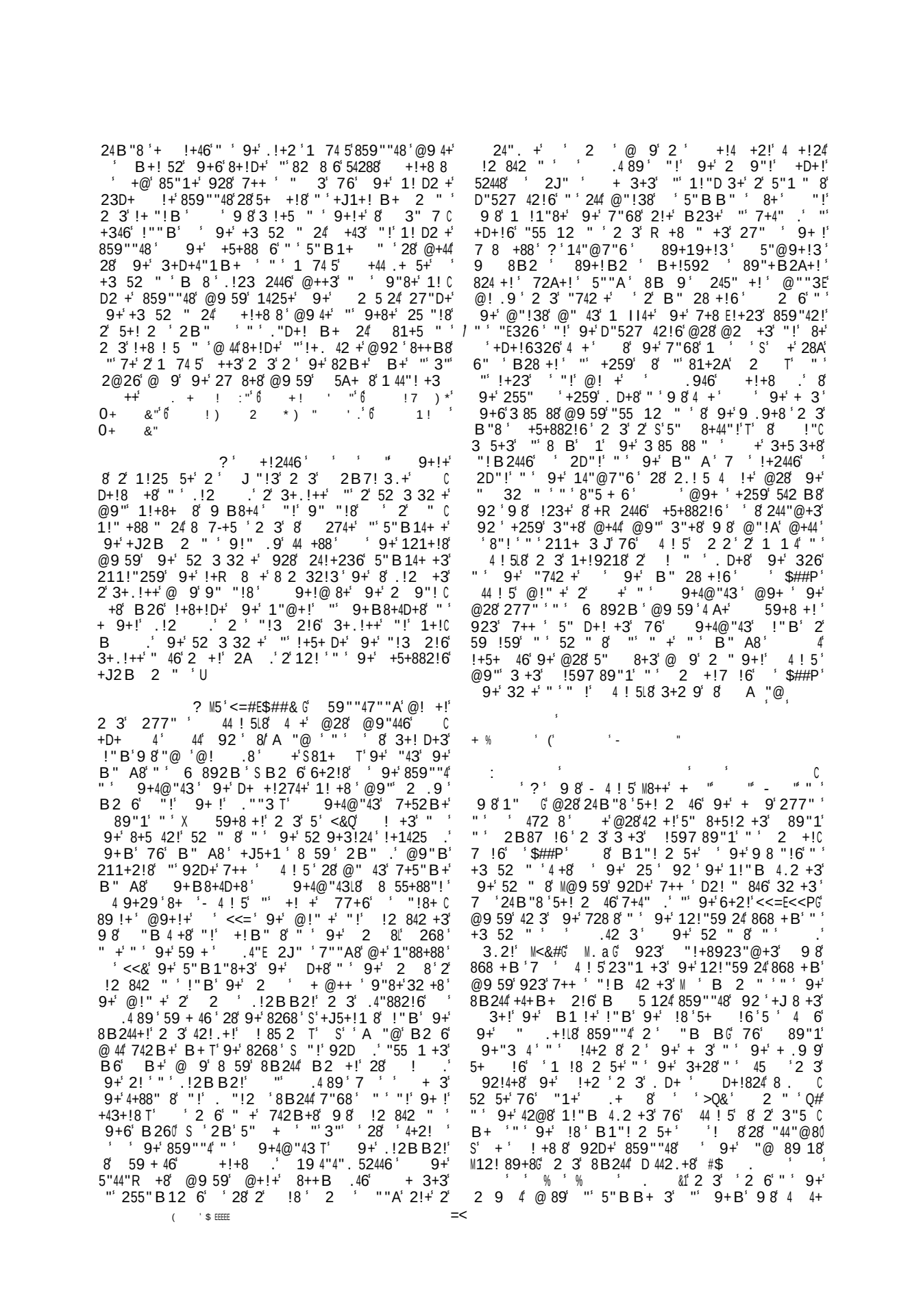

59 43!+ ' "!' 9+'4+2! .'"'4+ +!8'4+' 9+B' "' !+ 8+' "'!+5+ D+'2 3' +259' 9+B'F 7 '@ 9' 9+' .!+2 +8 '4"D+' +259' 9+B'!+B+B7+! .' 92 '@9 59' @28'@! + 0 9"8+'@9"'8924'7+'4+2! +3'8924'89 +' 28' 9+' 814+ 3" !'"' 9+' 9+2D+ '2 3' 9"8+' @9"' 8924' +259'B2 6' 9+'! .9 '@26'8924'89 +'28' 9+' 8 2!8' "!' +D+!' 2 3' +D+!'M 2 'J ';G' 9+ ' 9+!+ "!+' 9+6' +259' 9+B'4+' 9+B'3+B2 3' " 9 .' !"B' 9+B' ' 9+' @26' "' !+@2!3' "!' 9 8' "!'255+1 ' 2 6 9 .' !"B' 9+B'+JC 5+1 ' @92 ' 12!+ 8' !++46' . D+' "' 9+B' "' " ' 2'592! 274+'3+8 !+T' 9 8'1!"D 8 "' 7! .8' +3 52 "' "' 59' "' 9+' " +' 92 3' @ 9' 4"524' ."D+! B+ '8 5+' 9+' 1! +8 ' @28' 9+' S B288E 92 +T' 2 3' @ 9' " !' D 442.+!8' !+1C !+8+ +3' 9+' "@ 89 1' 2 3' "' 9+' " 9+!' @ 9' 9+' 89"1' @9"' 27" ' 9 8' 32 +' 5!+2 +3' 9+' " 5 24' A "@ ' 28' 9+' '%) ' :" "& 2 3' 8"' 5" !"44+3' 9+' 12!"59 24' 859""48' \a :' ' ' '

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9 B2 8' "' 9+' + 2 882 5+' 1+! "3' 7"! ' 2' "!8 . 2 "' ' $=#P' +. .' 28' 2' 8 3+ ' "'42@'2' + 2'9+'.2D+' 1' 9 8'8 36' "!'4 +!2!6' 1 !8 8' 2 3' 8 3 +3' "!' 2' B+' 3+!' 4+4 "' 9:" "& 2' 4"!+ 5+' 9!" .9" '2' D+!6'D+!82 4+' 4 +' 3 !+5 +3' 76' 2' "D+!1"@+! .' 2 3' 8+4 89' 2B7 " ' 9 8' +!+8 8' @+!+' B2 46' 4 +!2!6' 8' +2!46'3268' @+!+' 81+ ' ' 9+' 5"B12 6' "' 9 B2 8 8' 2 3'9+'@28' "'+J+B1' !"B' 9+'8+ C 8 24 +8' "' 9+' B+' ' 8'592!25 +! 8 5" ' 9 B' 92 '9+' +D+!'21"4". I+3' "!'9 8'4 +' 2' 9 8' B+' 2 3'28'1"1+'!+1 74 89+3'8"B+' "' 9 8' B"!+' R +8 " 274+' @! .8' 8' 4 +' 52!++!' 28' 2' 3 14"B2 8' @28'7+. ' 2' 9+' " 5 4' "' 284+' @9+!+' 9+' 7+52B+' 2' 8+5!+ 2!6' "' 9+' 2 1"1+' +4 J' (' + '" ' 2 '+B72886' "' 9+' B1+! 24' 5" ! '9+'255+1 +3'2 '" +!' "' + +!' 9+' B1+! 24' 8+!D 5+'@9+!+'9"@+D+!'9+'!+B2 +3' '"785 ! 6' "!' 8"B+' B+' !23 42446' 9+' @" ' 9+' 2D"!' "' 9+' B1+! 24' 92 5+44"!'2 3'@28'23D2 5+3' "' B1"! 2 '1"8 " 8' ' 9 8' B+'9+' " 3' ' 5" D+ + '" 592 .+' 9 8' D +@8' 2 3' 3+5 3+3' 92 ' 9+'7+8 '@26' "' ! 9+!'23D2 5+B+ '@" 43' 7+' "' + +!' 9+' 9 !59' +' "@' 8 11"! +3' "1+' .+ 8' ('2 3' '!+ ! '"!'9 8'8+!D 5+8' '!+8 "! .' 9+' 244+. 2 5+' "' +!B2 6' "' 9+' 21256' 9+' @28' B23+' 89"1' "' ! +8 +' +' 5" +3' "!'8+D+!24' B"!+'6+2!8' ' 9+' B1+!C "!'8 8+!D 5+'2 3'3+D" +3'9 B8+4' "'2 '2. 2 " ' 2.2 8' 9+' !A8' '$=P&' 9+'7+52B+'52!3 24' 2 3' !+ ! +3' "' 2' 4 +' "' ! . +' 2' "B+' @9 59'!+8 4 +3' '9 8' +4+D2 " ' "' 9+' 21256' $=P>' @9+' 9+' ""A' 9+' 4+' "' 8' +' 3 +3' '$=&=' + .2.+3' "' 9+ + 3' '1"4 524' 25C D 6

+28' 64D 8' @28' 2' 1!"3 5' "' 9+' B+' ' @9 59'9+'4 D+3' ++146' B7 +3'@ 9'2 ' + 8+' 4"D+' "!'4 +!2!6'1 !8 8'9+'.2D+'2'4 +!2!6' ! ' "' +D+!6 9 .'@9 59'9+' 3+! ""A' 8' @"!A8' @9 59' @+!+' " '9"@+D+!'5"B14+ +'@+!+'1 7C 4 89+3' ' PO' 2 3' 44+3' +4+D+ ' "4 "' D"4 B+8' 9+6' 54 3+'2' +@'1"+B8'2' 42!.+' B7+!' "' 4+ +!8' @! .8' " ' 9+"4".6' 19 4"8"196'2 3' 9 8 "!6' +' " 3' B+' ' 9+' B 38' " ' 9 8' 25 D +8' 2 3' ! . +8' "'@! +' ' ') ' (' ' / 1' 2 3' 2' 0 ' ' '7 ' (' "' "!' 9+' 9 8 "!6' "' +3 52 " ' 9+' +!+8 ' ') +28' 64D 8' 5+ +!8' '2' !+2 8+' "' ' . ')% ' + ') ') ' % & @! + ' "' 23 8428' .' "' "9+C B 2' 2 3' .2!6' @ 9' @9"B' 9+' 52B+' "' 5" 25' 2' 9+' B1+! 24' 5" ! ' 9 8' !+2 8+' !+1!+8+ 8' 9+'+3 52 " 24' 3+248" ' 9+' + 2 8C 82 5+' @9 59' B26' 7+' 8 BB+3' 1' ' S 9+' 5 4 !+3'.+ 4+B2 T' S' 2 !+' !2 .'2 3' 1!25 5+' 2!+' 9+' 9!++' 25 "!8' "' +3 52 " T' B1"! 2 5+' B 8' 7+' 2 259+3' "' 9+' 59" 5+' "' 2' +259+!' 2 3' 5"B12 " 8' S' ' 9+' 4.9' !2 .' "' 9+' 7"6' 4 +8' 9+' 8+5!+' "' 9+' C +.! 6' "' 9+' B2 T' +' 4268' +B1928 8' "' 9+' B1"! 2 5+' "' 1968 524' !2 .' 9+' +2!46' . 32 5+' "'2' B" 9+!'2 3' !2 .' '19 4"8"196' 2 3' 4+ +!8' 9+' 5 !! 5 4 B' 8' 92 '@9 59' 8' 61 524' "' 9+' + 2 882 5+'2 3' 5+ +!8' !" 3' .!2BB2!' 4 9" .9'2' 8 !" .' 23D"52 +' "' 9+' 5 4 D2 " '"' .""3' 8 64+'2 3' +J1!+88 " ' +28' 64D 8' @! .8' 52 "' 7+' 5"B12!+3' "!' 2 6'2 3'1"4 89' @ 9' 9"8+' "' B2 6' "' 9 8' 5" +B1"!2! +8' 8' 9+' 9 B8+4' @!" +' S' 6' 8 64+' "' @! .' 8'7"43'2 3' 1"4 89+3' 7 ' ' 8' !2 A' 2 3' @ 9" ' !211 .8 T

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' M G' : ? M$=<<E'
$PP;G' ' +!B2 '859""4B28 +!'7"! ' 'N +82!'
M !2 3+ 7 !.G'!+5 "!'" ' 9+'859""4' ' !248 3'
M$PQ=E$PQ>G' !"B' @9+!+' 9+' @28' 5244+3' "' 2B7 !.' "' 52!!6' " ' .+ 92.+ L8' 59""4' +. 42 " 8' :" "&" +' 3!+@' 1'59 !59' !+. C 42 " 8' "!' !248 3' 2B7 !.' 2 3' " 9+!' "! 9' +!B2 '5 +8

' ?' 9+'!+1 +3'2 9"!' "' 2'5"44+5 " ' " '274+8'@9 59'@28'5+! 2 46'1"1 42!' ' 9+ 8' ' 2 3' 7+ "!+' 9+' B+' "' +! 54+8' 8' 82 3' "' 92D+'7++ '7"! ' 2' 2B"8' M 9" .9' " 9+!' 5 +8' 542 B+3'9 8' "! . G' 2 3' "' 92D+'7++ '7!" .9' "' 9+ 8' @9 4+' 6" .' 28' 2' 842D+' 9+' 32 +' "'9 8'7 ! 9' B26' 92D+'7++ ' 9+'42 +!'12!'"' 9+' 8+D+ 9' 5+ !6' .+' 4 2!59' +!"3" 8' 2 3' 98+3! 8' 3+85! 7+' - 8"1' 28' 7+ .'+ !2 C 59 8+3'D 8 .' !"+8 8'!+7 A .' "4" 'D 8 .' 9+ 8' @9+!+' 9+' 8' 82 3' "' 92D+'5"B1"8+3' 9+' 274+'"': 1 +!'2 3' 9+' !".8'3 ! .' 9+' 6!2 6' "' 8 8 !2 8'2 3' 7+ .' 246' 528' !"B' 2'1!+C 5 1 5+'76' 9+' +419 2 8' @9 4+' " '2 '+B72886' "' 9+B' !"B' !"+8 8' 9+' 274+8' "! . 2 +3' 76' 4"D+' "!'4 +!2!6'1 !8 8'9+'.2D+'2'4 +!2!6' ! 8"1' B26' " ' 92D+' 7++ ' 2' !8' 1 ' "'

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@! .' 7 ' 923' 2' .!+2' D". +' 2B" .' 9+' 2 5 + 8' 28' "!24' 24+8' "5!2 +8' 28' 2' 1! 8" +!' ! +3' 8"B+' "' 9+B' "' +4+. 25' D+!8+' 2 3' +B+ ! 8' 924+!+ 8' 2 3' 98+3! 8' "44"@+3' 9 8' +J2B14+' 9+' B"3+!' 274+8' A "@ ' 28' 8"1!8' 2!+' 81 ! " 8' 2 3' 2112!+ 46' "' "! + 24' "! .

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!') !) ' 2 . " M ".!2196' "' i 8"1' ' +3' "' '
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) 8"1' 2 . 1' ! ' ' ' (' ' ?' %' 2 . "
M " 3" ' $>><G
0!) "' / ' (' % ''% " M 2B7! 3.+'
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- ' ?' ' 2112!2 8' "!'
B+28 ! .' 9+' 3 8 2 5+' 7+ @++ ' @"' 1" 8' "'
9+' 8A '@9 59' 52 '7+'- 8' !+5". I+3' 28' 8+12!2 +'
!"B' +259' " 9+!' ' 12 !' "' "!3 2!6' 3!2@ .'
5"B1288+8' B26' 7+' 8+3' "!' 9 8' 1 !1"8+' "!' 2'
9"! I" 24' 72!' @ 9' 23- 8 274+' 1" 8' 9+' + 38'
89" 43' 7+' B23+' "' '92!3' ! 77+!' "!' 7" +' 8"' 28' "'
2D" 3' +J5+88 D+' 8 B 42 "' "' 9+' +B1+!2 !+'
81" 8' ' ' +7+!' @9"' @28' 9+' !8' "' 8+'
8 59' 2 ' 2112!2 8' " 3'V 92 ' 9+' 3 8 2 5+8'
@9 59' 5" 43' 7+'- 8' !+5". I+3' D2!6' !"B' " +'
B 44 B+ +!' "!' 4+88' " ' 9+' + 3' "' 9+' .+!' "' 8 J'
5+ B+ +!8' ' 9+' B 334+' "' 9+' 725A' 9+'
2112!2 8' 8' !+5"B B+ 3+3' 76' ! +87259' 28' 2'
B+2 8' "' B+28 ! .' 2 . +' +!B2' 2 3'
" 9+!8' 92D+' !+-+5 +3' 9 8' !+5"B B+ 32 " ' "'
9+' 728 8' "' +427"!2 +' 8+! +8' "' ' +8 8

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/* ' ' ' . ' :) '(' $ % % '
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' ?' 9+' 19 4"8"196' "' 9+'
7+2 4' ' 2 !+' "!' 2! ' ?') 8 9+ 58' 7+.2 '
' 9+' +2!4 +8' 81+5 42 " 8' "' 9+' !++A8' 5" C
5+! .' 9+' 2 !+' "' 7+2 6' 2 3' "' 2!' "5C
!2 +8' !2 8+3' 9+' R +8 " ' "' 9+' !+42 " '7+ @++ '
8+' 2 3' 7+2 6' 2 3' + 3+3' "' 3+ 6' 9+' @"
' 9 8' 3 85 88 " 8' "' 9+' D2! " 8' 2! 8' 9+' 288 B+8'
92' 2!' 8' B 2 " ' 2 3' 92' 9+' 2! 8' 52'
B 2 +' +D+ ' R 24 +8' "' 592!25 +!' ' 8 55+88C
4' B 2 " ' 8"B+9"@' . D+8' 14+28 !+' ' 3 8C
5 88 .' 9+' 2!' "' 9+' 85 41 "!' 9+' + 8' 8' 92'
9+' 2! 8' 8+4+5 8' 9+' 7+8' +2 !+8' !"B' 9+'
D2! " 8' "7-+5 8' 9+' 928' 8++ ' 2 3' 5"B7 +8' 9+B'
' 2' @"!A' @9 59' 9+' 8' B2A .
42 "' "44"@+3' "5!2 +8' ' 9+' 7+4 + ' 92' 2!'
8' +88+ 2446' B 2 D+' 9 8' 25' 24" +' @28'
8 4 5 + ' "' 5" 3+B ' ' ' 42 "l8' B 3' "!'
9+' 9+43' 92' 9+' "7-+5 '@9 59' 9+' 2! 8' B 2 +8'
8' 8+4' B+!+46' 2' 5"16' "' 9+' ! +' 3+24' "7-+5 '
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+ 9 524' .!" 38' "B+!' 2 3' 9+' " 9+!' 1"+ 8'
B 8!+1!+8+ ' 9+' ."38' 2 3' 9+ !' 4 + 5+' 8'
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"' @9 59' 2!' 211+248' 2!+' - !" 8' "' 8 !+ . 9' "'
592!25 +!' 2 3' ."3' 5 I+ 89 1' 42 "' 8' 9"@E'
+D+!' 2' @"!89 1+!' " ' 7+2 6' 2 3' 9+' 1425+8'
1" ' 2 ' +R 24 6' @ 9' ! 9' 2 3' ."3 +88'
+2 6' ' 9+' 1968 524' !+24B' 8' 2A ' "' 9+'
8+ 4' "!' 9+' 1 !1"8+ 4' 7 ' ' 928' 248"' 92!B" 6'
2 3' B+28 !+' 28' +88+ 24' R 24 +8' '1"88+88+8'
' 233 " ' 6' 1 ! 6' 5"B14+ + +88' 2 3'
1+! +5 " ' !+/7+2 6' 8' "' 7+' " 3' '
8 !2 .9' 4 +8' 2 3' 5 !D+8' ' 8 B14+' 2 3' 1+!C
+5 46' !+. 42!' . !+8' ' 8B"" 9' 2 3' 54+2!'
8" 38' ' 1 !+' 5"4"!8' 1 ! 24' 7+2 6' 8'
3+ 524' @ 9' 9+' D ! +8' 78"4 +' 7+2 6'
7+4" .8' "' 9+' @"!43' "' 3+28' 9+' 14+28 !+'
@9 59' 7+2 6' . D+8' 8' 1 !+' 2 3' B J+3' @ 9'
12

! 8 " 4+' 4 A+' 9 8' 1!+3+5+88"!8' 239+!+8' "' 9+'
B 2 D+' 9+"!6' "' 2! ' 7 ' 9+' 7!"23+ 8' 9+'
2114 52 " ' "' 9+' +!B' S B 2 " T' ! ' B C
2 +8' 2 !+' 7 ' 2 !+' 8' "' B23+' 1' 8 B146'
" ' "7-+5 8F' ' 928' 248"' +!' 1! 5 14+8' 2 3' 9+'
2! 8' B 2 +8' 9+8+' 28@+44' 28' "7-+5 8' 2 3' 25 D C
+8' 8 5' 8' "!' ! 8 " 4+' 9+' B"8' B 2 D+'
" ' 9+' 2! 8' ! 8 " 4+' 3 +!8' @ 3+46' !"B' 42 "'
' 9 8' +8 B2 +' "' 9+' + 9 524' 7+2! .8' "' 2! '
+' !+.2!38' 2! ' 28' 2' D24 274+' 8" !5+' "' !+42J2C
" ' 2 3' 2 ' B1"! 2 ' B+2 8' "' +3 52 " '
9+' +J+!5 8+' "' 9+' +B" " 8' "' 1 6' 2 3' +2!'
"5528 " +3' '76' !2.+36' + +5 8' 2' 1 !.2 " ' "'
9+8+' +B" " 8' 42 "' 9+43' 92' 9+' +J+!5 8+'
" ' 8 59' ++4 .8' + 3+3' B+!+46' "' 8 !+ . 9+ '
9+B' 9+' B1 48+' "' 9+' 1!"3 5 " ' "' 2!'
8' "' 7+' " 3' ' 9+' 8 5' "' B 2 " ' 9+'
14+28 !+' "5528 " +3' 76' 9+' 1+!5+1 " ' "' 2'
8 55+88 4' B 2 " ' 8' 9+' 14+28 !+' "' !+5". C
" ' ! 8 " 4+' 3 3' " ' 3 85 88' 2' 4+ . 9' 9+'
2 !+' "' 7+2 6' 7 ' 9+' 3 3' 288+!' 92' 2'
7+2 4' "7-+5 ' B 8' 92D+' ' 233 " ' "' 2 '
"!3+!46' 2!!2 .+B+ ' "' 12! 8' 2' B2. 3+'
@9 59' 8924' 7+' + 9+!' "' 8B24' "!' "' .!+2 '
"!' +286' 5"B1!+9+ 8 " ' ' 2' 8 .4+' .42 5+
9+!+' 8' "' 5" 5+1 " ' 2B" .' 9+' !++A'
9 A+!8' " ' 2' 8+12!2 +' 85 + 5+' "!' 2' 8+12!2 +'
+43' " ' 8 36' 8 59' 28' @+' 9 A' " ' 3+!' 9+'
2B+' " ' 2+8 9+ 58' 9' "5!2 +8' 2 3' 42 "'
9+' 3 85 88 " ' " ' 9+' 1!"74+B8' " ' 2+8 9+ 58' 8'
8 2446' 5 3+ 24' ! 8 " 4+' 3+D" +3' 2' @"!A' "'
1"+ !6' 7 ' 2112!+ 46' +D+ ' 9+' 923' "' 5" 5+1C
" ' "' 2+8 9+ 58' 28' 2' 8 7-+5 ' 3 8 5' !"B' " 9+!'
8 7-+5 8' ' 8' ! +' 9"@+D+!' 92' 9+' !++A8'
3 3' 3 85 88' B"8' " ' 9+' B1"! 2 ' 1!"74+B8' " '
2+8 9+ 58' 9+6' 3 85 88+3' 9+' 2 !+' " '
7+2 6' 8' !+42 " ' "' 4 6' 9+'!+28" '@96' '
. D+8' 14+28 !+' 9+8+' 1!"74+B8' 92D+' 1+!8 8 +3'
9!" .9' 9+' @9"4+' 9 8 "!6' " ' 2+8 9+ 58' 9+6'
3 85 88+3' 9+' 2 !+' " ' 2! ' 9+' B1 48+8'
@9 59' . D+' ! 8+' "' 2! ' 9+' + 9 524' 8 . 52 5+'
" ' 2! ' 9+8+' "" ' 92D+' 7++ '5" 8 2 46' ' 9+'
"!+.!" 3' 1' "' 9+' 1!+8+ ' B+' 42 "'
!2 8+8' 9+' R +8 " ' 28' "' 9+' A 3' " ' 14+28 !+'
@9 59' 7+2 6' . D+8' 2 3' 9 8' 2.2 ' 8' 2' R +8 " '
@9 59' 8' 8 44' 2@2 .' 2' 24' 2 8@+!' 42 "'
2 +B1 8' 248"' "' 8 2 +' 9+' 592!25 +! 8 58' 1"8C
8+88+3' 76' 9"8+' 4 +8' 2 3' 8 B14+' .+"B+ ! 524'
. !+8' @9 59' 2!+' !+.2!3+3E28' 7+2 4' 9 8'
@+' 2!+' 8 2446' 54 +3' "' 9 A' " ' 28' 2' B"3+!'
'1!"74+B' 2 3' 3++3' 9+' 2 +B1' 2' 2' .+ +46'
85 + 5' 8"4 " ' " ' ' 7+.2 ' " 46' 2 +!' 9+

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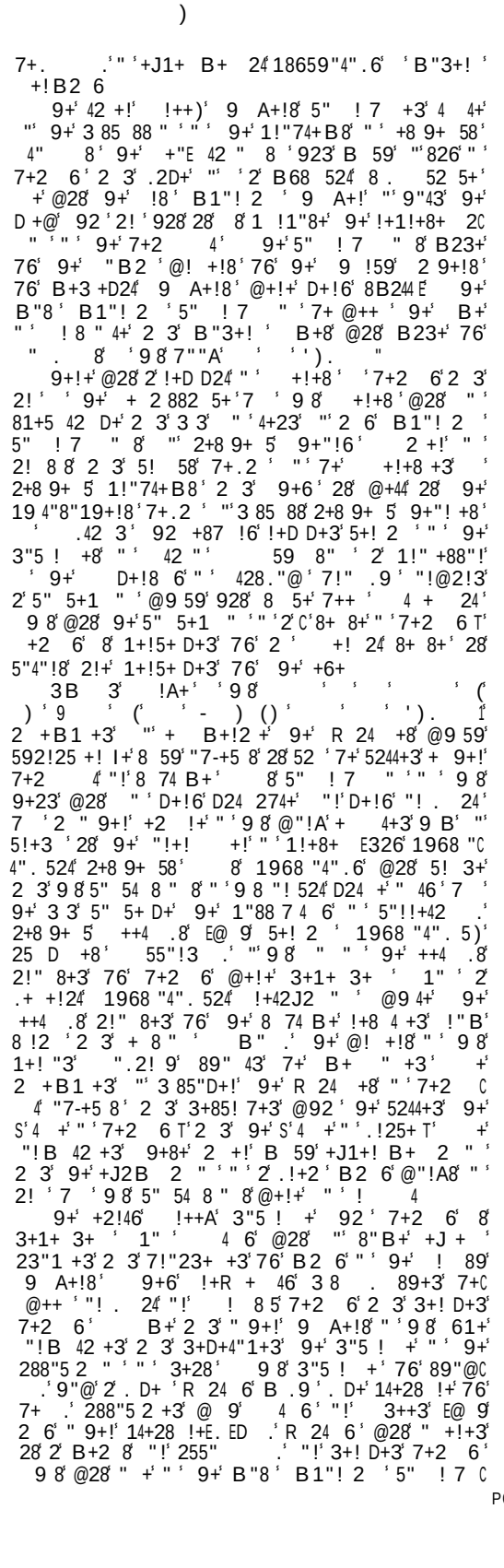

1 !1"8+ 9 8 3"5 ! +@28 !+D D+3 2 3 B23+ B 59 " 76 9+ 1+ 5+! 2 859""4 59 44+!
B23+ 2 D+!6 B1"! 2 5" ! 7 " "! 9+
4 +!2 !+ " 8+8 9+ 58 9 8 4+ +!8 " 0
M %)% (9+8+ 9+
7! .8 "!@2!3 28 9+ 5 +3 52 " 28 2 B"8
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+.+4 B23+ 2 5"B 14+ +@ 868 +B " 8+8 9+ 58
9+ B"8 5"B 14+ + 92 9 8 "!6 928 8++
9 8 868 +B 2! 2 B8 2 9+ 5!+2 " "
7+2 4 2 3 9+ 7+2 4 8 9+ 5" 5!+ +
+B7"3 B+ " 9+ 3+2 9+ 3+2 8 9+ D+!6
+88+ 5+ " 9 .8 9+ 4 B2 + !+24 6 " C
+B1"!2!6 /2 3 42 +! 9 A+!8 233+3 9+ !
R " 2 "! 9+ 3+D+4"1B+ " 9+ 8 7-+5
59"1+ 92 +! 3 !+5 "11"8 " "! 9+ +4
4+5 24 8B " +.+4 B23+ 2! 9+ +B7"3 B+
" 9+ @ 44
3 8 5 46 +@ 4 + " 3+D+4"1B+ @28
8+ 3+!@26 76 +59 +! @9"! 2114 +3 "! 9+
8 36 " 2+8 9+ 5 "7-+5 8 9+ +J1+! B+ 24
B+ 9"3 9+ 81+5 42 " 8 " 42 "E !+.2!3 .
9+ R 24 +8 " 9"8+ .+"B+ ! 524 . !+8 @9 59
2!+ 7+2 4 9+ 5" 54 8 " 8 " ".2! 9 !+C
.2!3 .' 9+ S 4 + " 7+2 6 T 2 3 , 81+5 C
42 " 8 " N+ 8 . 2 1!+3+5+88"! " +59 +! " 9+ 8 7-+5 " 2+8 9+ 5 1!"1"! " 8 8 B14+
.+"B+ ! 524 . !+8 923 " 4+3 "! D+8 .2C
" 8 @9 59 5" 43 7+ 3+85! 7+3 28 8 ! 5 46
85 + 5 +59 +!I8 B+ 9"3 @28 85 + 5
2 3 8 +!+8 . " " 92 9 8 5" 54 8 " 9
" +!+81+5 5" 5 3+3 @ 9 92 " N+ 8 .
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9 8 @28 2 B+ 9"3 " 3 D 3 .' 2 4 + 8 59
2 @26 28 "! B2A+ 8 3 D 8 " B"8 14+28 .
2+8 9+ 52446 9+ 1!"1"! " 8 @+!+ 8 59 92
9+ 89"! +!+ 8+.B+ " 9+ 4 + 7"!+ "! 9+
4" .+!+ 8+.B+ 9+ 82B+ !2 "! 28 9+ 4" .+!
8+.B+ "! 9+ 4 + 28 2 @9"4+ 9+ !+5 2 .4+
" B"8 14+28 .' 1!"1"! " 8 @28 " + 5" C
8 ! 5 +3 @ 9 9+8+ @"! 8+.B+ 8 28 3 B+ C
8 " 8 +59 +!/8 +J1+! B+ 8 8++B+3 "! +8 27C
4 89 9 8 9+"!6 59 B+ 2 3 427"! 92D+
7++ 3+D" +3 "! +J1+! B+ 24 2+8 9+ 58 7
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" 9+!+ 3+12! B+ " 9+ 8 7-+5 @9 59
928 !+5+ 46 7+5"B+ ! 4 8 92 @9 59 8
728+3 1" 9+ 8 36 " 9+ 2! " 1! B D+
1+"14+8 3 +8 9 8 +43 92D+ + 3+3 "!
7!"23+ 9+"! +8 " 2! 7+6" 3 9+ 5" 5+1C
" 8 2!! D+3 2 76 2 8 36 " !"1+2 2!
24" + 2 6 !+5+ @! +!8 92D+ 233+3 "! 9+
4 +!2 !+ " 9+ 8 7-+5 9+ !D2! " 8 +438
8659"4". 6 .+ +!24 +J1+! B+ 24 2 3 1968 "C
4". 524 8"5 "4". 6 2 3 2 9!"1"4". 6 92D+ 7++
9+ +438 @9 59 B"8 !+5+ @! +!8 92D+
@"!A+3
9+ 1!"74+B8 " 8+8 9+ 58 B26 7+ .!" 1+3
28 "44"@80 !8 9"8+ 92 92D+ "! 3"! @ 9
2! 8 2 !+ "! . 2 3 !+42 " 8 " 9+!
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@9 59 92D+ "! 3"! @ 9 9+ 7+2 4 9+ 8 7C
4 B+ 9+ 4 3 5!" 8 9+ 1 5 !+8R +2 3 !+42 +3
R 24 +8 9+ 9+"! +8 " 9+ 2 !+ " 2!
2!+ B2 6 9+6 54 3+ 9+ 2 5 + 9+"!6
92 2! 8 B 2 " 9+ 9+"!6 92 2! 8 9+
1!"3 5 " " 9+ 7+2 4 D2! " 8 +44+5E
24 8 5 9+"! +8 " 2! 2! 3 9+ 9+"!6 92
2! 8 +B " 24 +J1!+88 " +.+4L8 3"5 ! +
92 2! 5!+2 .' 9+ 7+2 4 +B7"3 +8
9+ 3+2 @9 59 8 9+ +88+ 5+ " 9 .8 9+
9+"!6 92 2! 1!+8+ 8 92 @9 59 8 8 . C
52 E 2 "7-+5 "! 92 @9 59 8 592!25 +! 8C
5 + 9+!" 9+ 3 D 3 24 "! " 9+ 61+ "!
92 @9 59 8 9+ 3"B 2 +2 !+ "! 92
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244 +44+5 24 8 5 9+"! +8 9+ 9+"!6 92
2! 8 +B " 24 +J1!+88 " 9"438 92 7+2 6
B 2 " 2 3 9+ 1!+8+ 2 " " 3+28 "
@92 +D+! 8"! 2!+ 8 B146 B+2 8 "@2!3 9+
+J1!+88 " " ++4 .' 9+"! +8 " 9+ B1 48+
"! 9+ 1!"3 5 " " 2! 2!+ B+!" 8 C
54 3 .' 9+ 9+"!6 92 9+ 2! B1 48+ 8 "!
7+ " 3 9+ B 2 D+ 8 5 "! 9+
1426 8 5 "! 9+ 3+8 !+ "! 2 !25 76
14+28 ." "! 9+ 3+8 !+ ". D+ 5" 5!+ + +B C
7"3 B+ "! 3+28 "! "! ++4 .8 L
2 +! 24 "! 9+ 8 36 " 9+8+ 1!"74+B8 8
" 3 9+ 9 8 "!6 " 2! 2 3 " 2! 8 8
5! 5 8B 9+ 18659"4". 6 " 2! 211!+5 2 "
9+ 8 36 " 9+ 2! 8 " 1! B D+ 1+"14+8
9+ 1!"74+B8 @9 59 !+42 + "! 9+ 7+2 4
8 74 B+ + 5 24 "! @"! .! 18 ? 9"8+
@9 59 2!+ 5" 5+! +3 @ 9 9+ 592!25 +! 8 58
" 9+ 7+2 4 "7-+5 8 2 3 9"8+ @9 59 2!+
5" 5+! +3 @ 9 9+ R 24 +8 " ++4 .8 2!" 8+3
76 8 59 "7-+5 8 9+ 2 8@+! "! 9+ !8
R +8 " 8 8"B+ B+8 8 2 +3 B+ 21968 524
+!B8 8"B+ B+8 +!B8 @9 59 2!+ "
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8 9+ 5" 5!+ +B7"3 B+ " 9+ ! + 9+
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2!+ B+ 21968 524 592!25 +!
9+ 8"E5244+3 S +J25 288 9+ 58 T 928 2 C
+B1 +3 "! 3 85"D+! 76 +J1+! B+ 24 B+ 9"38
9+ R 24 +8 "! 1!"1"! " 8 " 7-+5 8 @9 59
2!+ " 3 "! 7+ 8+8 9+ 52446 14+28 . 9 8
B"3+ " 211!"259 .' 9+ 8 7-+5 928 " 6+
. D+ ! 8+ "! 2 6 B1"! 2 3+1+ 3+
.+ +!24 I2 " 8 8 2446 9+ !+25 " 2.2 8
9+ B+ 21968 524 8"4 " " 9+8+ 1!"74+B8
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3+85! 7+3 2 I8 3+85! 1 " 928 24!+236
7++ B+ " +3 9+ 1+ 5+! 2 859""4 9"438
92 2 +8 9+ 5 14+28 !+ 8 2 14+28 !+ @9 59 8
!++ !" B 244 8 . .+8 " " 4 +E8+!D . 5 " 8
) 8 9+ 5 ++4 .' 928 7++ 3+ +3 28 14+28 !+
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" 9+ "7-+5 M !"@ 2 3 2 262 2 28 14+28C
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M 2!89244 + 5 968 "4". 524 8+8 9+ 58 2 +B1 8
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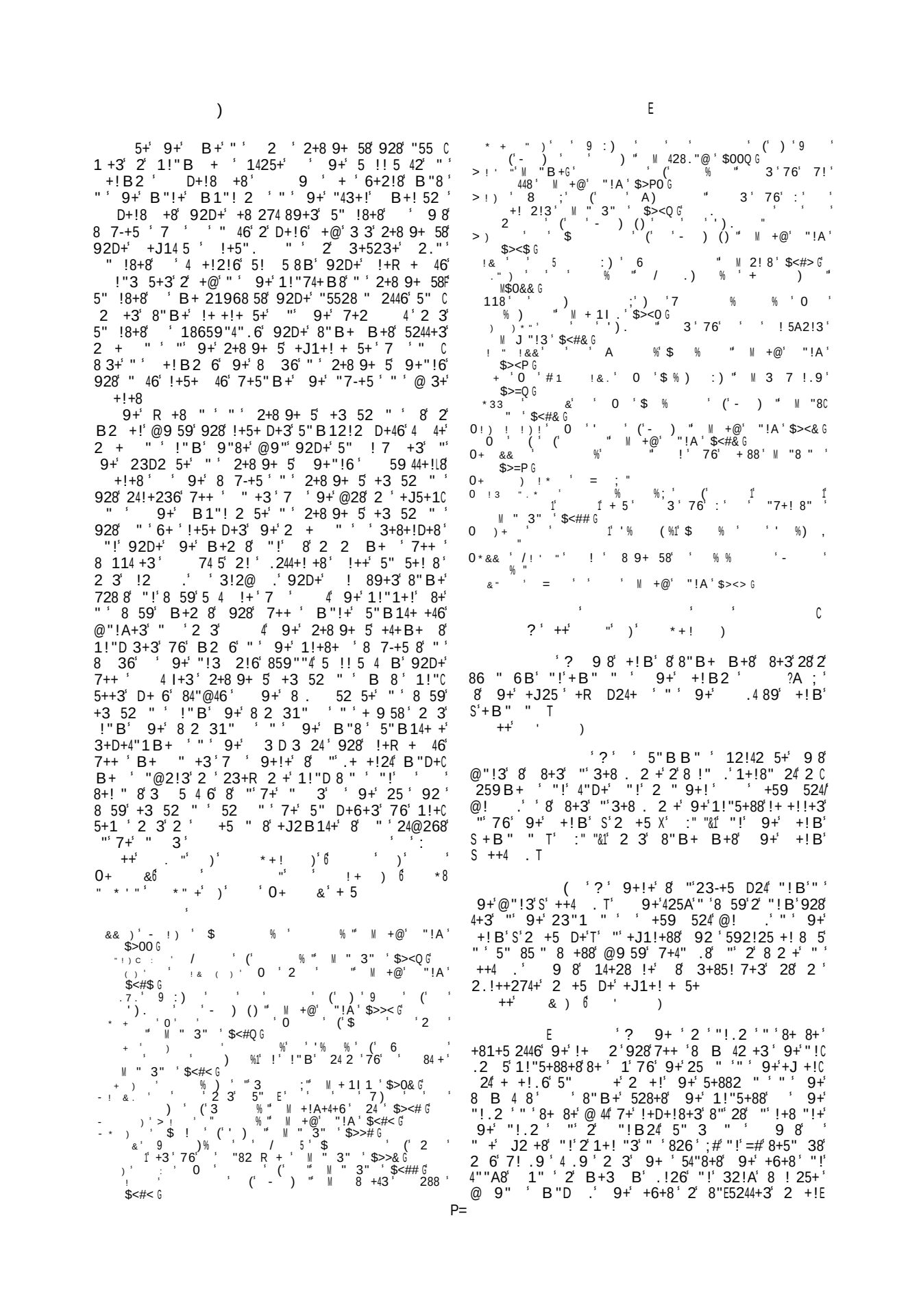

image is observed. This image has the shape of the light looked at, and may be, especially if the light be bright, for an instant of the same general color and intensity. The color, however, soon changes. If the light fixated be ordinary white light, such as a white surface reflecting the rays of the sun, or an incandescent lamp, the second type of the after-image will be dark, although retaining the general shape of the source of light. If the object fixated be colored, the second form of the after-image will be the complementary color to that of the source of light. A red object will, for instance, become bluish green in the after-image; a yellow object, blue; a green object, purple, etc. The first type of the after-image is called positive; the second, negative. Positive after-images are undoubtedly due to the fact that the nervous apparatus concerned in vision retains for a while, even after the stimulus of light has been removed, the physiological effects of such stimulus. The negative after-image is probably due to some sort of reversal of this physiological process in the eye. R. P. A.

After-images of hearing do not appear; there are after-images in all other spheres of sensation.

See also ADAPTATION, SENSORY.

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AGASSIZ, LOUIS (JOHN RUDOLPH) (1807–1873). — The distinguished naturalist and science teacher was born at Motier, in the canton of Fribourg, Switzerland, May 28, 1807, and received his elementary and secondary education in the gymnasium at Bienne and the college at Neuchâtel. It was the purpose of his parents that he should follow commercial pursuits, but his keen interest in scientific studies led them to allow him to take up the study of medicine — first at the University of Zürich, and later at Munich and Heidelberg. He was first professor of natural history in the college at Neuchâtel and director of a scientific observatory in the Alps. He visited France and England to acquaint himself with scientific men and movements, and in 1846 he accepted an invitation to give a course of lectures before the Lowell Institute in Boston. The year following he accepted the professorship of zoölogy and geology in the Lawrence Scientific School which Harvard University had just organized. In 1873 he organized on the island of Penikese a summer school of marine zoölogy for teachers, which brought most of the foremost instructors of science under his instruction. He was a natural teacher, says one of his students, fond of giving instruction, patient and sympathetic, overflowing with an earnest love of his subject, and having a mind replete with stores of information. The title of which he was proudest was that of the instructor rather than the investigator, and he took real pleasure in inscribing himself as "Louis Agassiz, teacher." He gave great impetus to the teaching of

Louis Agassiz.

science in secondary schools, and, besides his textbooks on physiology and natural history, he published a work on methods of teaching natural history, and made notable contributions to the literature of ichthyology. He died at Cambridge, Mass., Dec. 14, 1873.

W. S. M.

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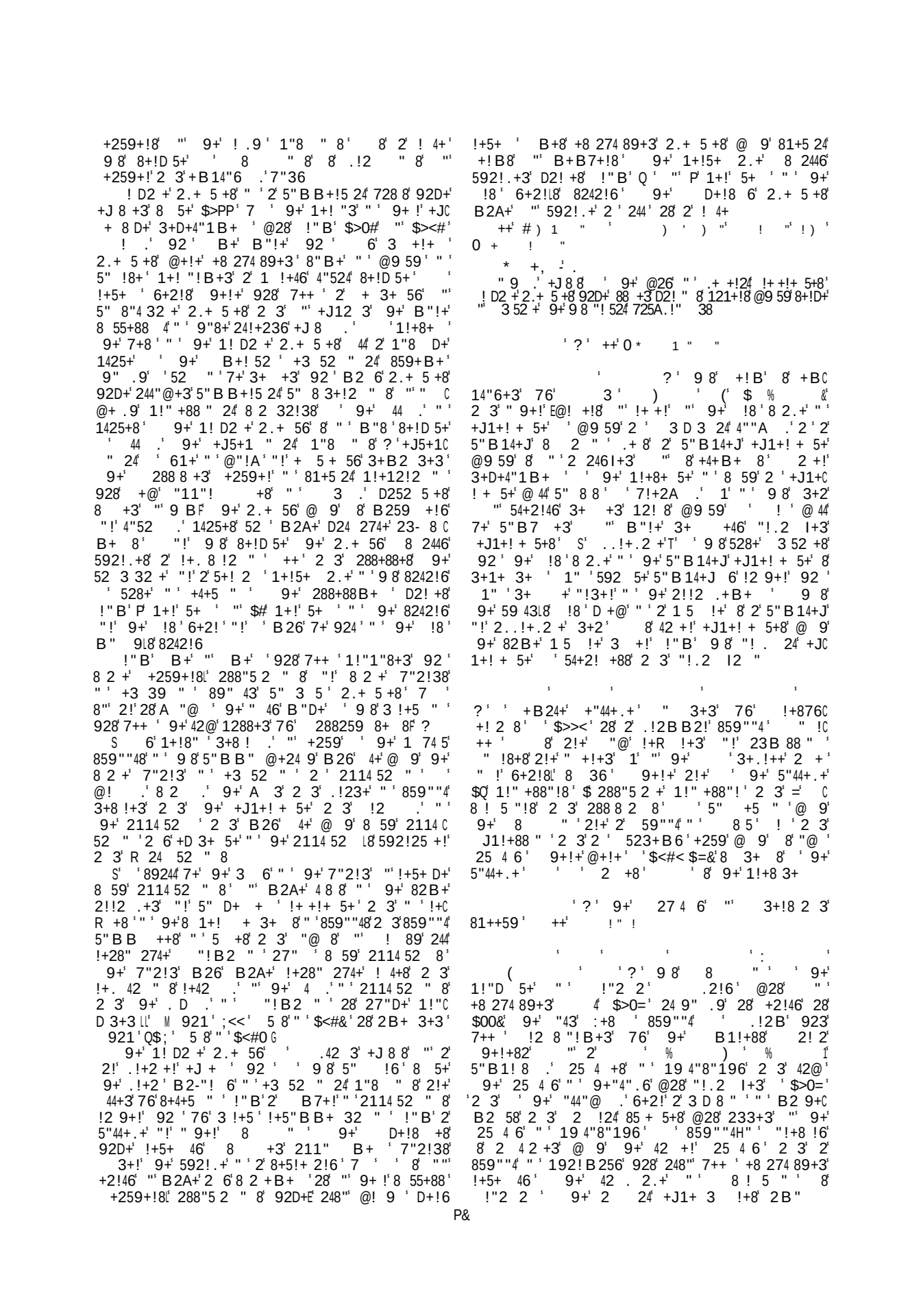
AGE, SCHOOL. — See ATTENDANCE, COMPULSORY.

AGE OF COLLEGE AND HIGH SCHOOL STUDENTS. — See STUDENTS, AGE OF.

AGENCIES, TEACHERS' EMPLOYMENT. — In an informal manner, academies, colleges, and normal schools in their early history in America acted as employment agencies, to the extent of receiving applications for teachers and making recommendations for vacancies. Toward the close of the nineteenth century, this work within educational institutions was much systematized, and now it is usually directed by a special secretary or agent, who systematically compiles estimates of candidates, obtains information regarding possible sources of employment, and directs eligible



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to about $100,000; the library contains about 125,000 volumes and almost 800 manuscripts. 1059 students were in attendance during the winter semester of 1909–10, of whom more than half were enrolled in the faculty of law, the institution not supporting a medical faculty. All of the departments of the Croatian National Museum, founded in 1846, are closely affiliated with the university, as is the South Slavic Academy of the Sciences and Arts, organized in 1866, which has a collection of about 400 paintings, 2650 manuscripts, 30,000 documents, and 40,000 books. The university also stands in close relationship to the Royal Meteorological Observatory, established in 1861, which is the central station for Croatia and Slavonia; a seismological station is connected with the observatory.

AGRAPHIA. — A disorder of the associations of speech, in which there is a partial or complete inability to express ideas by means of written symbols, in an individual who had previously acquired this mode of speech expression. Often associated with apraxia (*q.v.*), and with the so-called motor aphasia.

See APHASIA. S. I. F.

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WESTPHAL. Ueber einen Fall von amnestischer Aphasie, Agraphie und Apraxie nebst eigenartigen Störungen des Erkennens und eklamptische Psychose. *Deutsche Med. Wochenschr.*, XXXIV, 1908, 2320.

WOLFF, G. Zur Pathologie des Lesens und Schreibens. *Allg. Ztsch. f. Psychiat.*, LX, 1903, 509.

AGRÉGATION. — The highest teacher's diploma of the French secondary schools, required of all full professors in the lycées (*q.v.*). In the boys' schools there are eight orders of agrégés, viz. philosophy, letters, grammar, history and geography, mathematics, physical sciences, natural sciences, and modern languages (English, German, Italian, Spanish). The candidates for the agrégation, the examination for which comes generally at the completion of the course in the higher normal school, although it is not restricted to students of that institution, must already hold the bachelor's and the master's degree and the diploma of higher studies. The difficulty of this examination is still further increased by the fact that it does not depend upon attaining a certain standard of intellectual power, but is a competitive examination, the number of appointments to be made in each group being determined by the Minister one year in advance in accordance with the probable needs of the service. The possession of the agrégation carries with it five hundred francs per year over and above the regular salary attached to the position. There are five agrégations for women, viz.: letters, history, mathematics, physical and natural science, and modern languages. There are likewise agrégations in the various fields of professional education: law, medicine, and pharmacy.

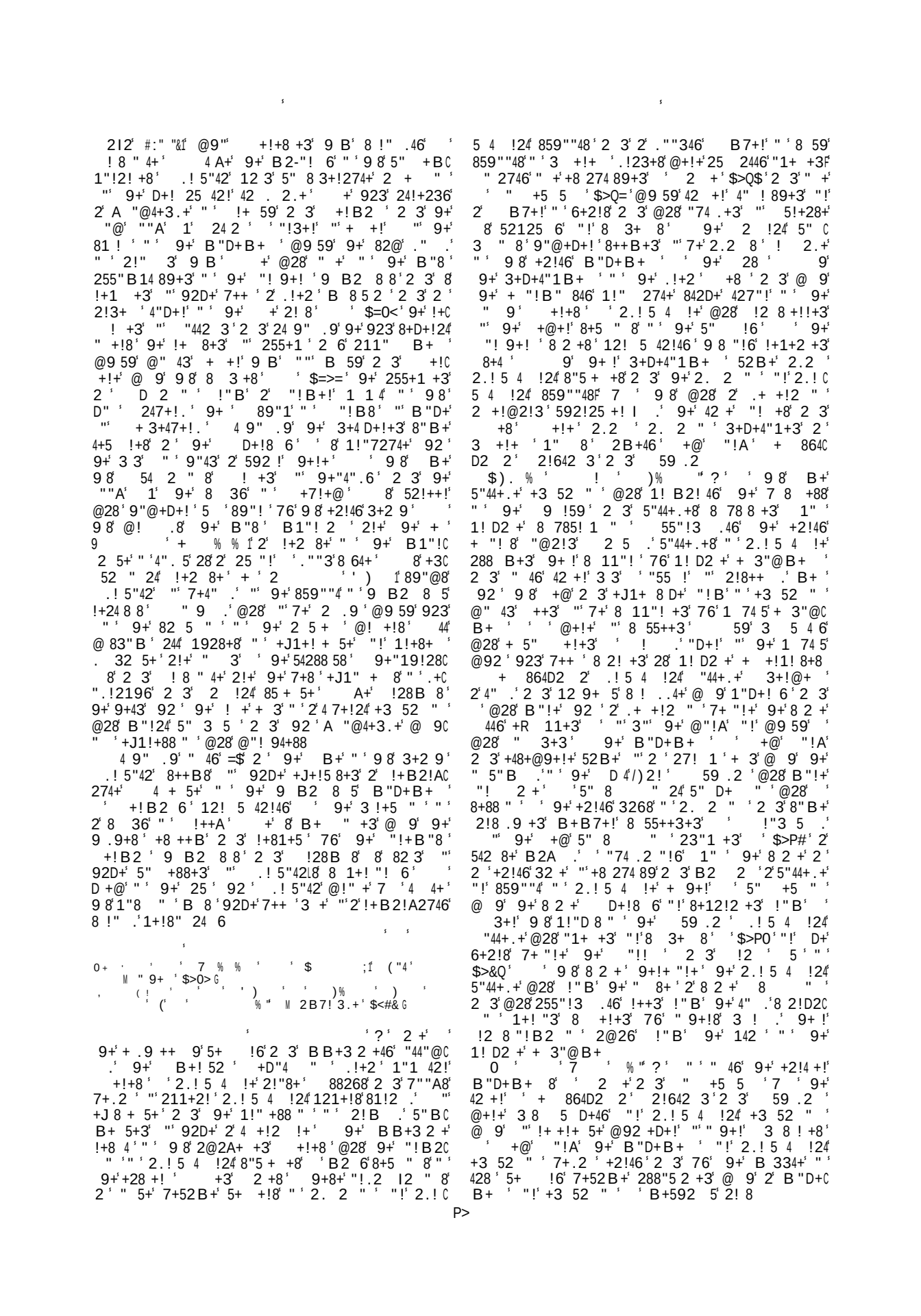
See FRANCE, EDUCATION IN.

AGRICOLA (SNEIDER) JOHANNES (1492–1566). — A German schoolmaster. He was born in Eisleben, wherefore he is also known as Magister Eisleben. In 1525 he was rector of the newly established school in Eisleben, for which he wrote a textbook for religious instruction. In 1527 he composed, by Luther's direction, a catechism for small children. He also made a collection of German proverbs.

AGRICOLA, RUDOLPH (1444–1485). — One of the most influential of the northern humanists. Born near Groningen in Holland, he

RODOLPHVS AGRICOLA GROENINGVS.
Si tibi maturis tantum licuißet ab annis,
Quod medium ſtatuis perficere Agricola;
Auctores alij poterant tacuiße diſerti:
Quidquid enim ratio poſtulat ipſe dabas.
Rudolph Agricola.

attended the school in that town. It is impossible to verify the tradition, which is of late origin, that he attended the schools of the Brethren of the Common Life (*q.v.*). At the age of 14 he obtained his bachelor's degree at Erfurt, and at 17 his master's at Louvain. His main interests at that time were in mathematics and philosophy. In 1468 he went to Italy and began a study of law at Pavia, which he soon abandoned to study Greek under Battista Guarino (*q.v.*) and Theodore



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288259 8+ 8 8 27" ' 9+ " 46 +J2B14+
MQG 9+ 5"44+.+ 92 ' " +!8 5" !8+8 ' 7" 9 2.! C
5 4 !+ 2 3 + . ++! .' 8"B+ 7+ .' A "@ ' 28
2.! 5 4 !24 2 3 B+592 524 5"44+.+8 ' 28 '
88 88 11 F 8"B+ 28 8 2 + 5"44+.+8 ' 28 ' "@2
2 3 + 864D2 2F 2 3 2 +@ 28 2.! 5 4 !24
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2 828 ' M;G 9+ 2.! 5 4 !24 5"44+.+ 92 ' 8
5" +5 +3 @ 9 2 8 2 + D+!8 6 2 3 5" 8 C
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M=G 9+ 2.! 5 4 !24 5"44+.+ 92 ' 928 2 8 B 42!
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" ' " 2746 +8" 2 2 3 +7!28A2 ' M<G
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5 4 ' 5" !8+8 2 3 @ 9 5+! 2 ' 81+5 5 !+R !+C
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" 8 ' 2 3 @ 9 B"!+ "!' 4+88 4 7+!24 1!"D 8 " 8
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54288+8 1+ 3 .' 9+ 5"B14+ " ' " ' 9+ !' B2 ! 5 C
42 "
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2 +B1 8 ' +81+5 2446 " ' 9+ D+!8 +8 ' 2 4+3
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8 ! 5 " ' ' 2.! 5 4 !+ 89" 43 "44"@ ' 2 3
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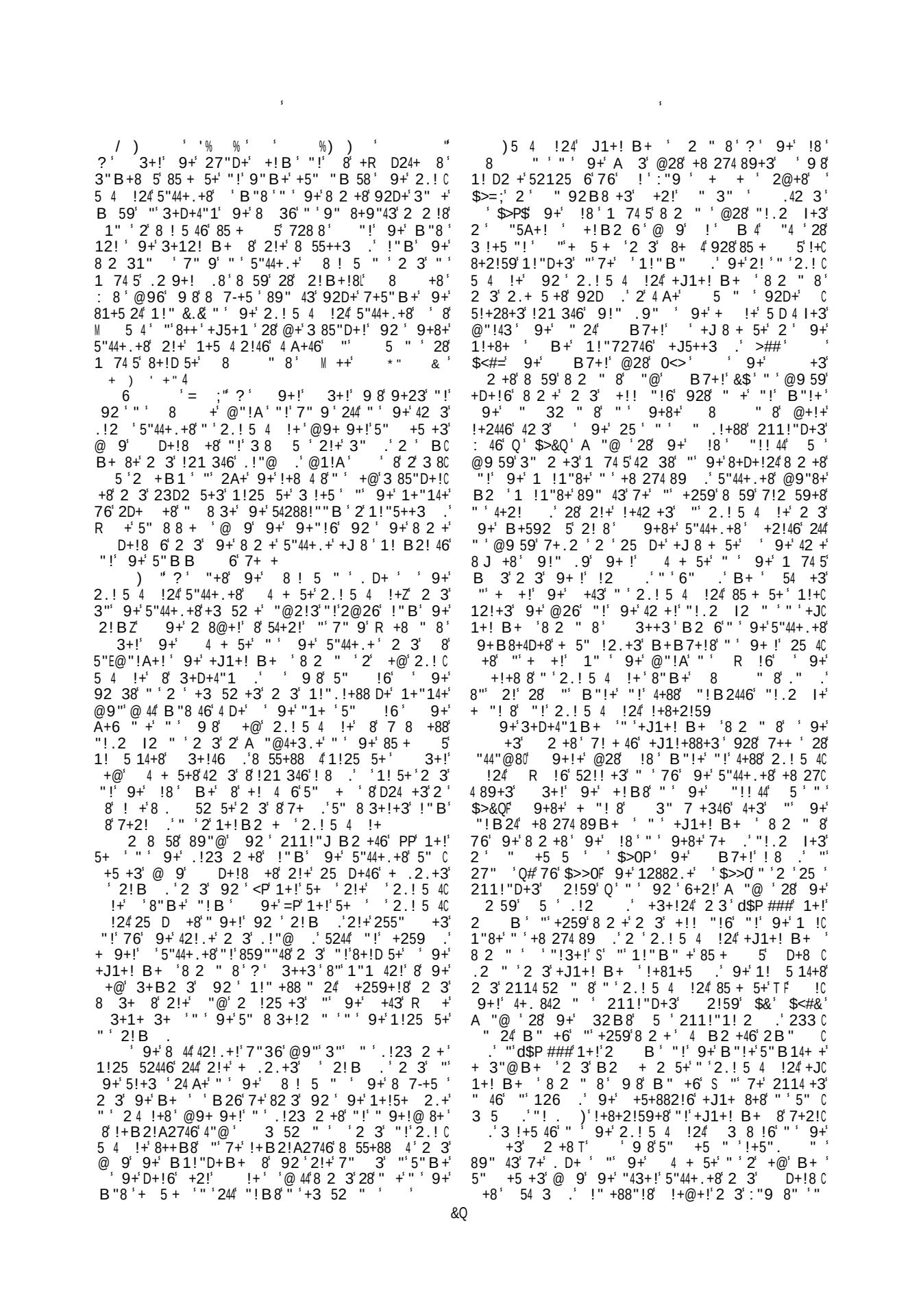

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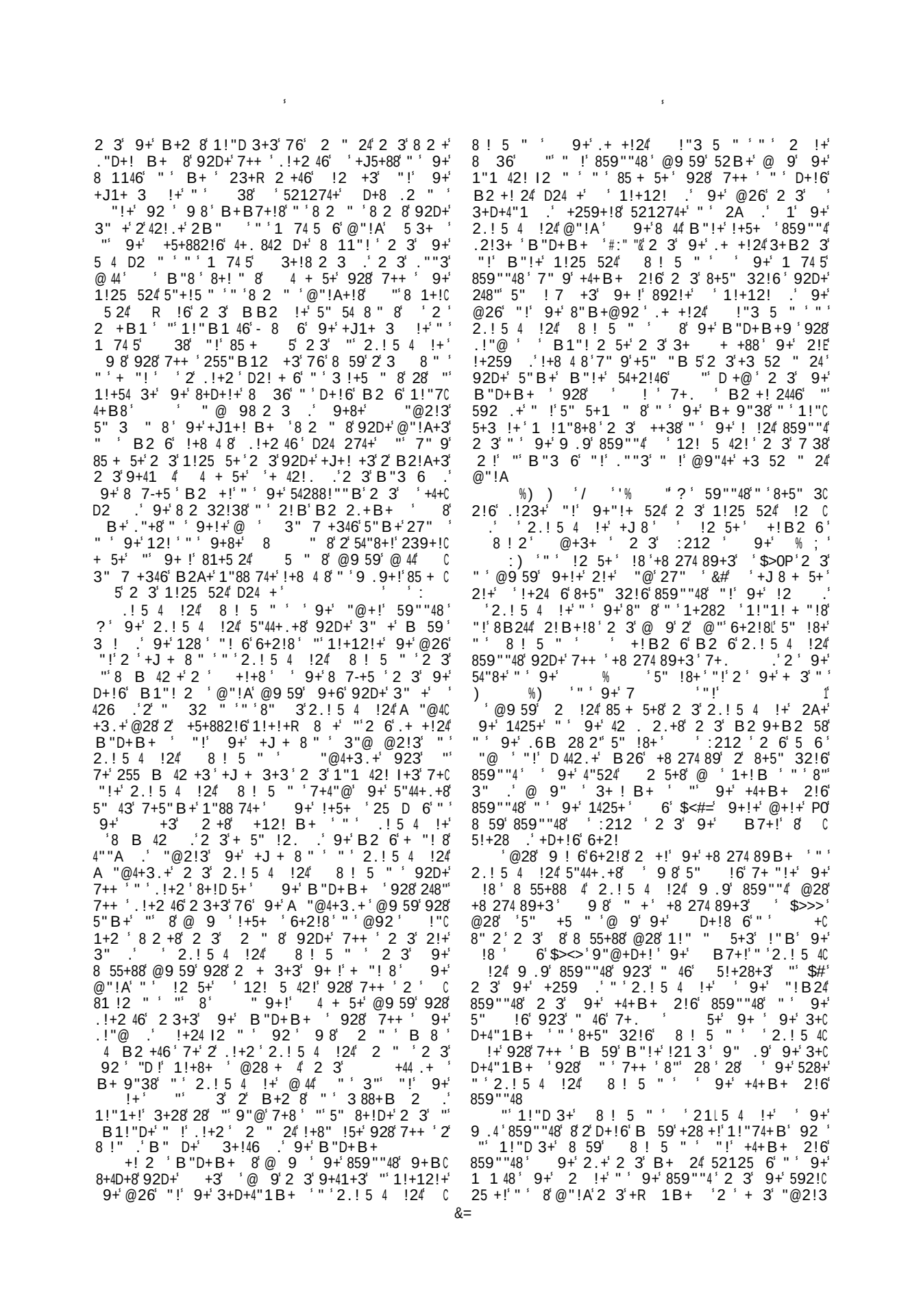

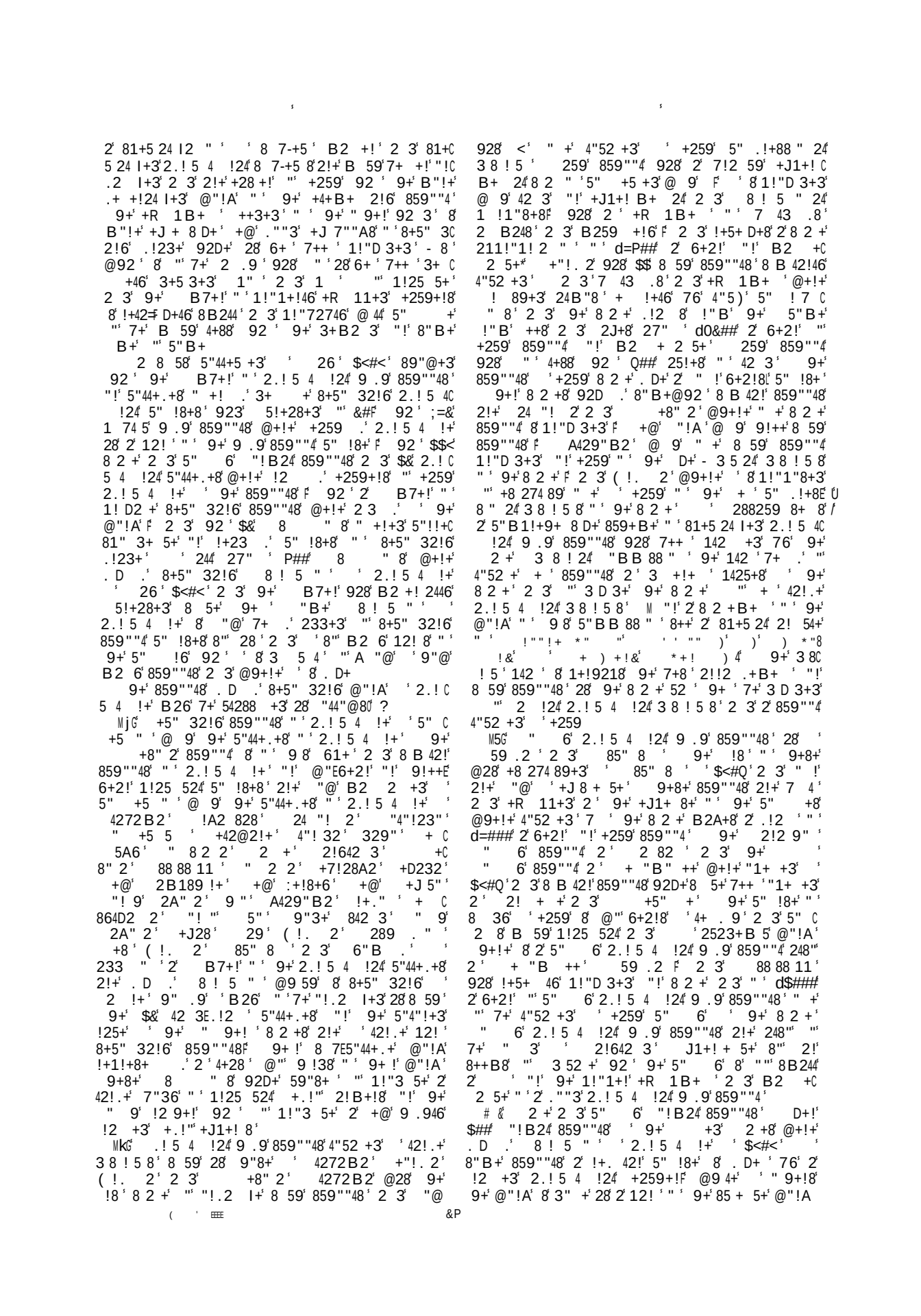

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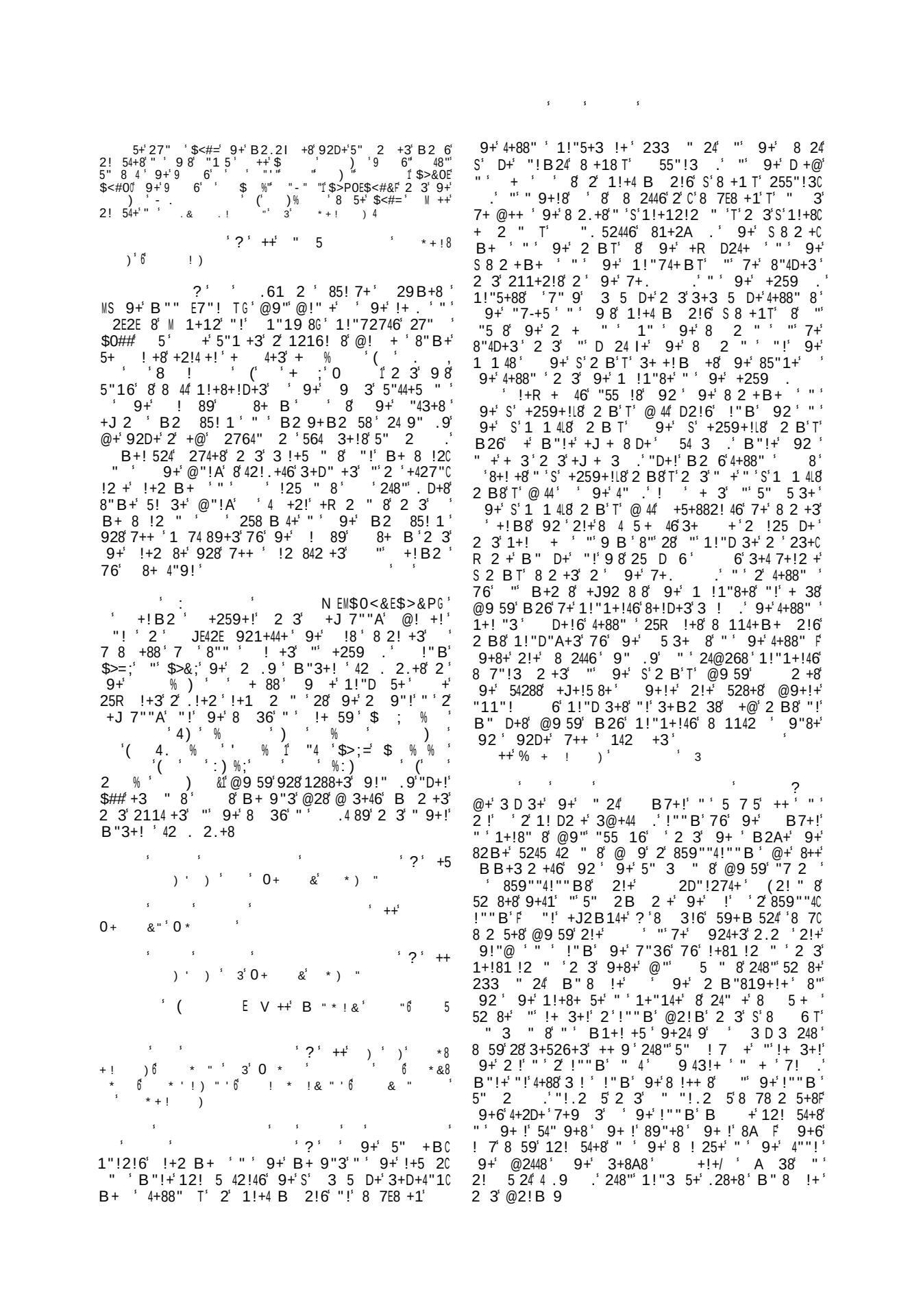

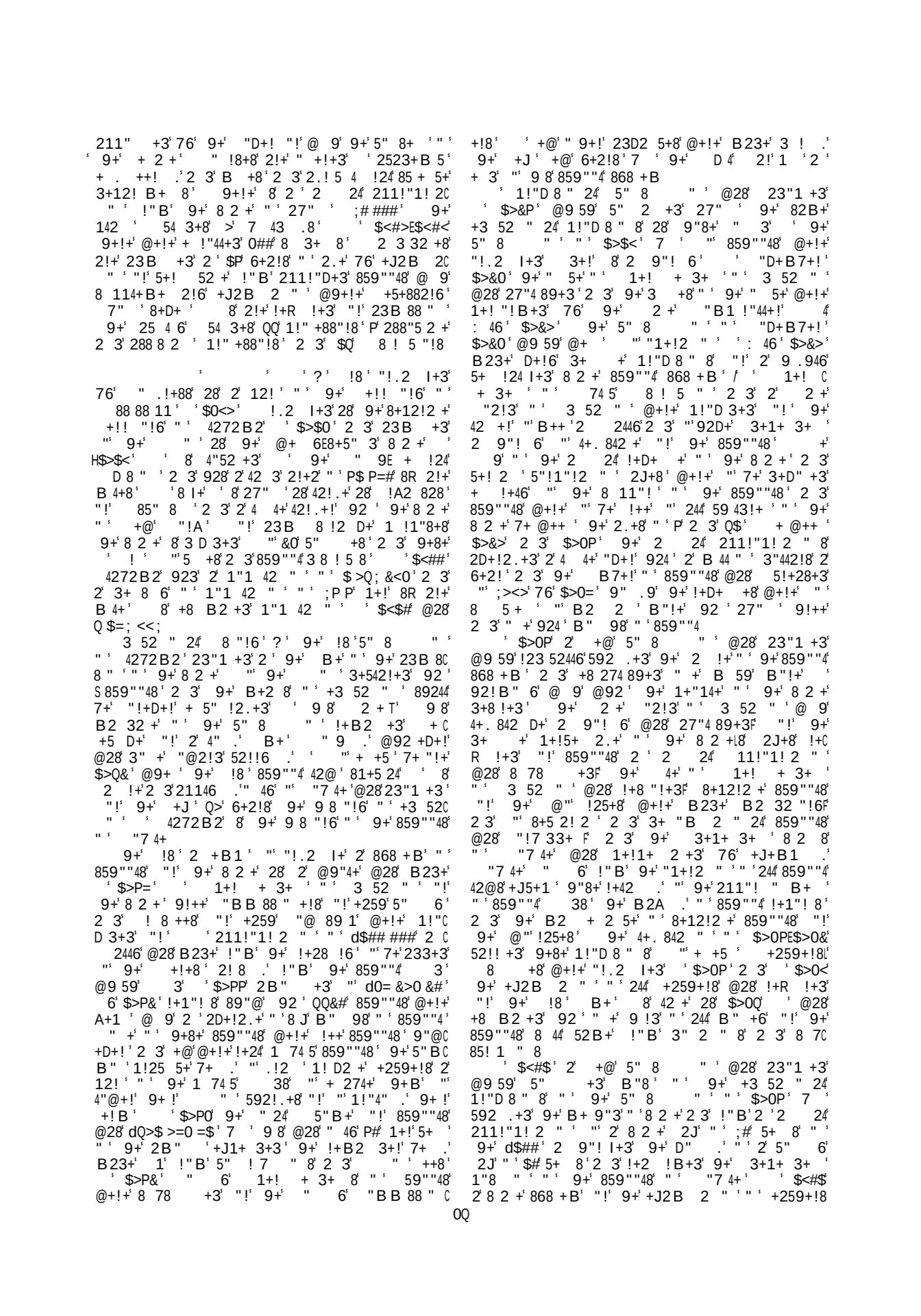

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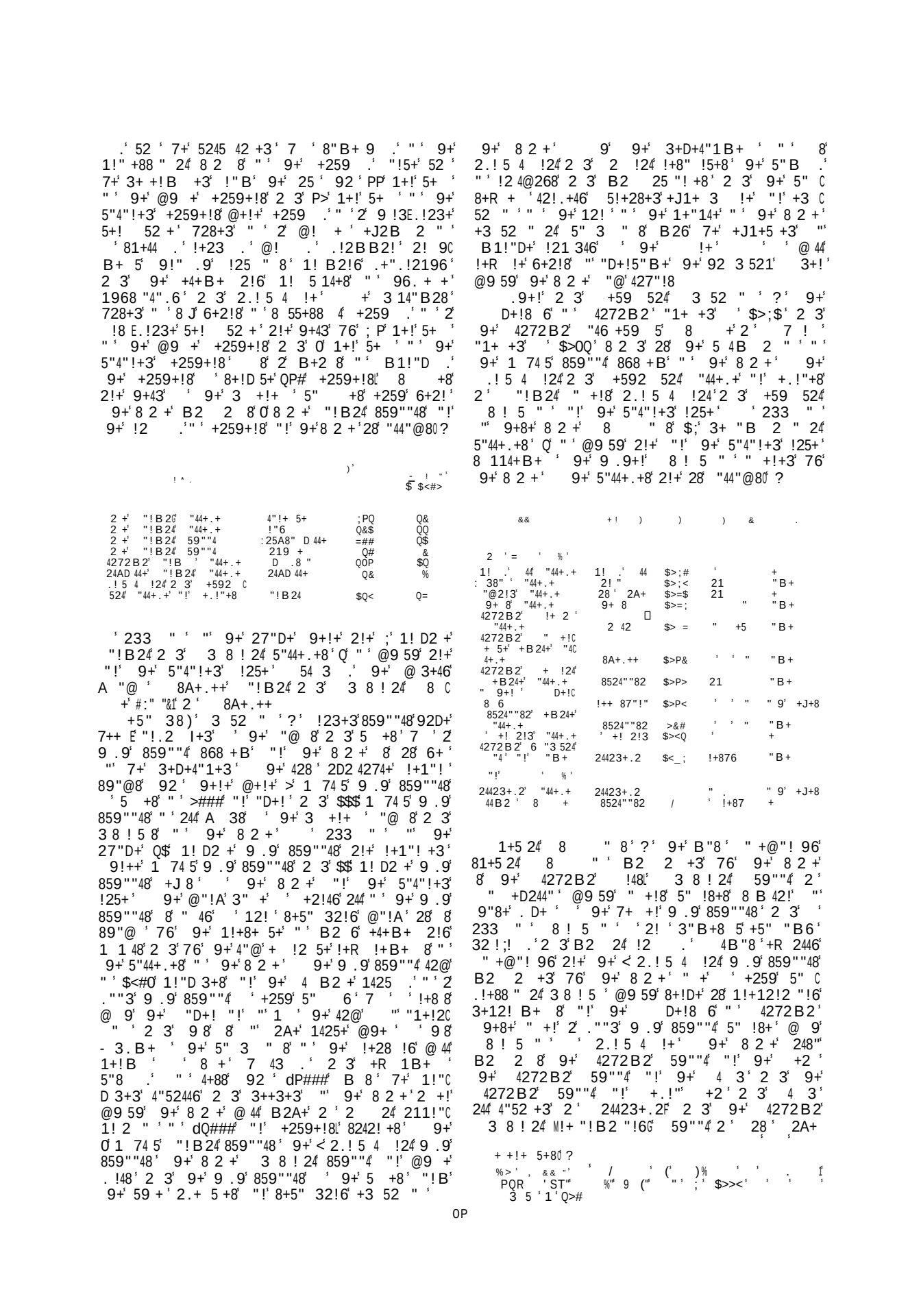

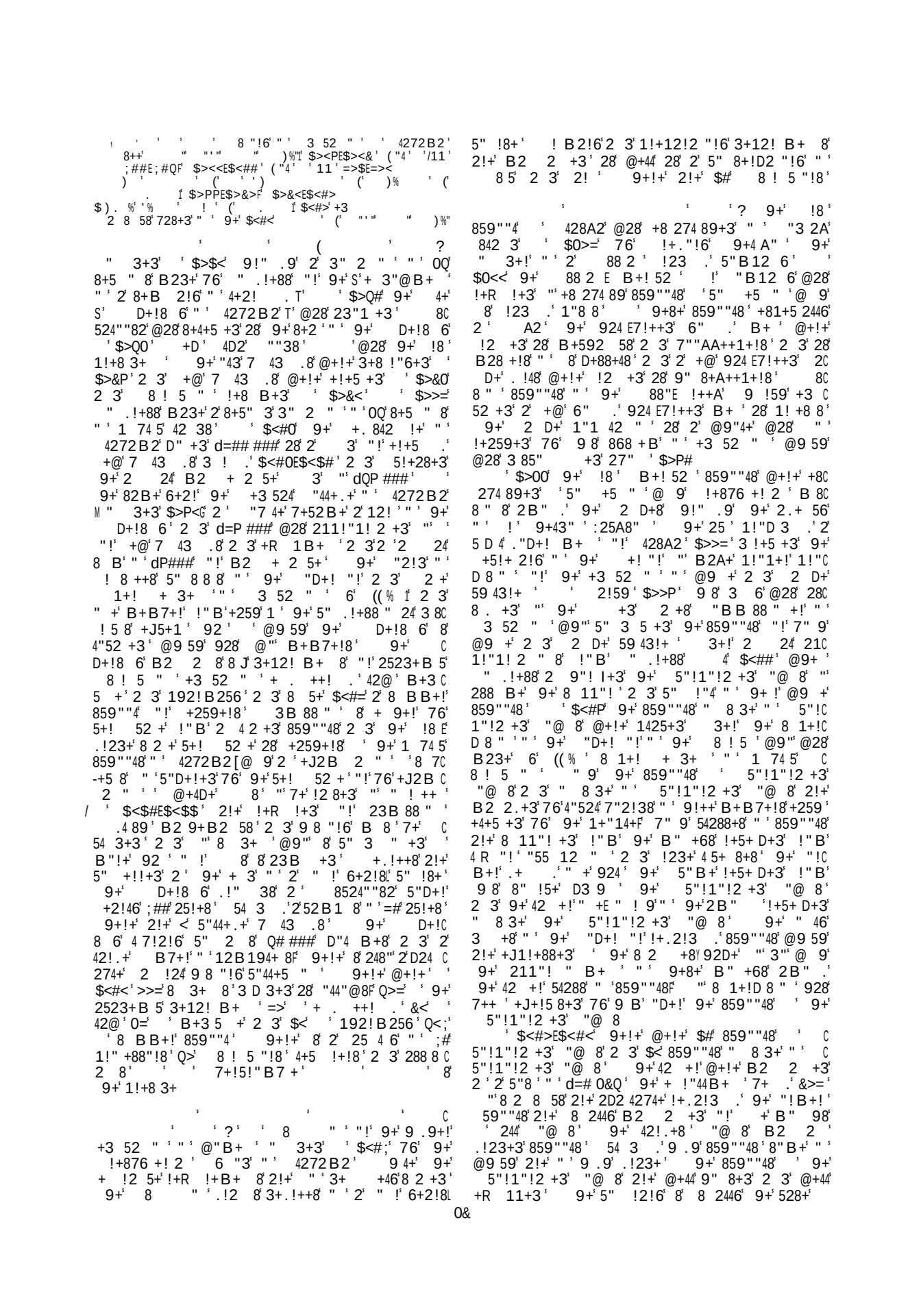

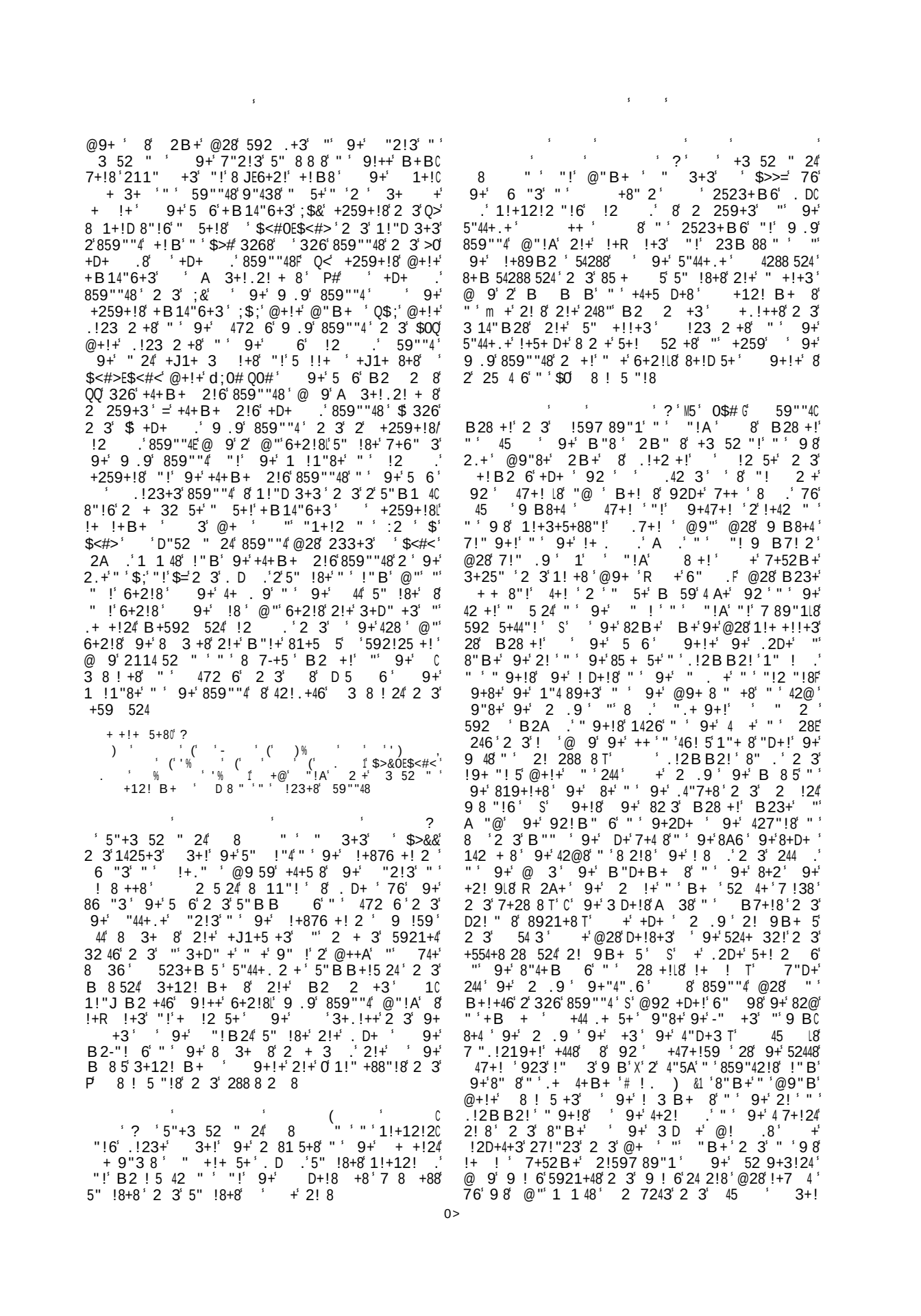

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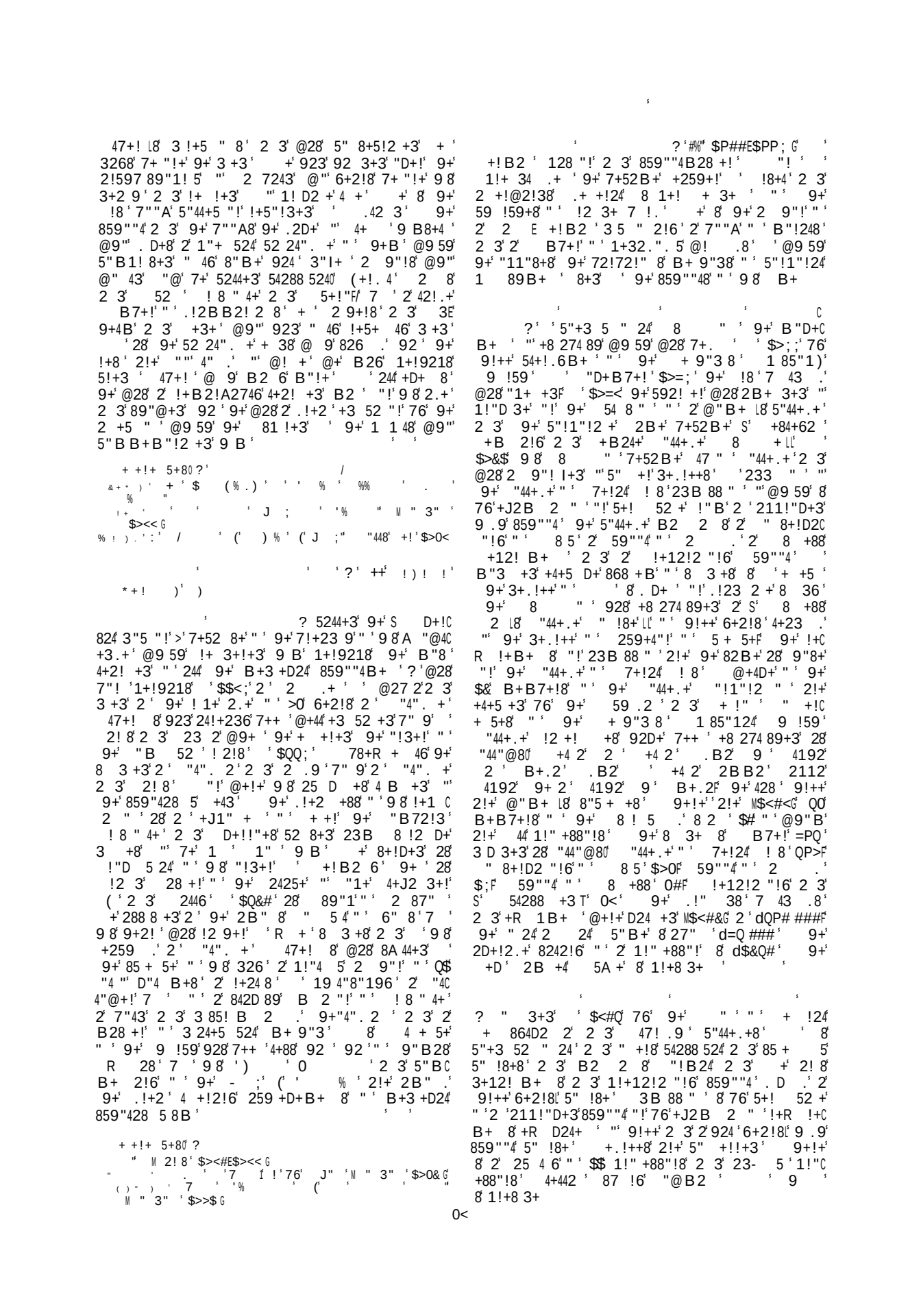
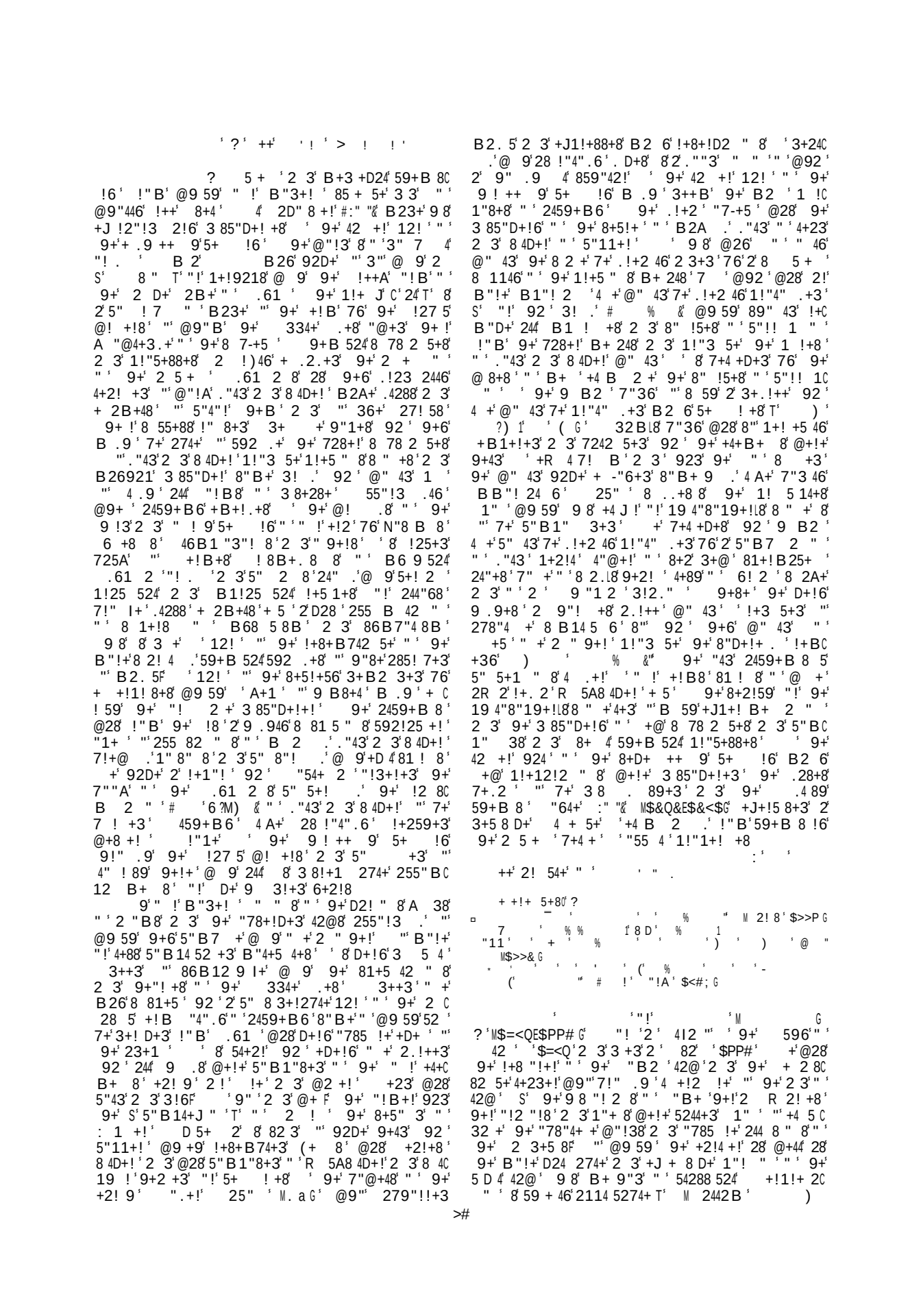
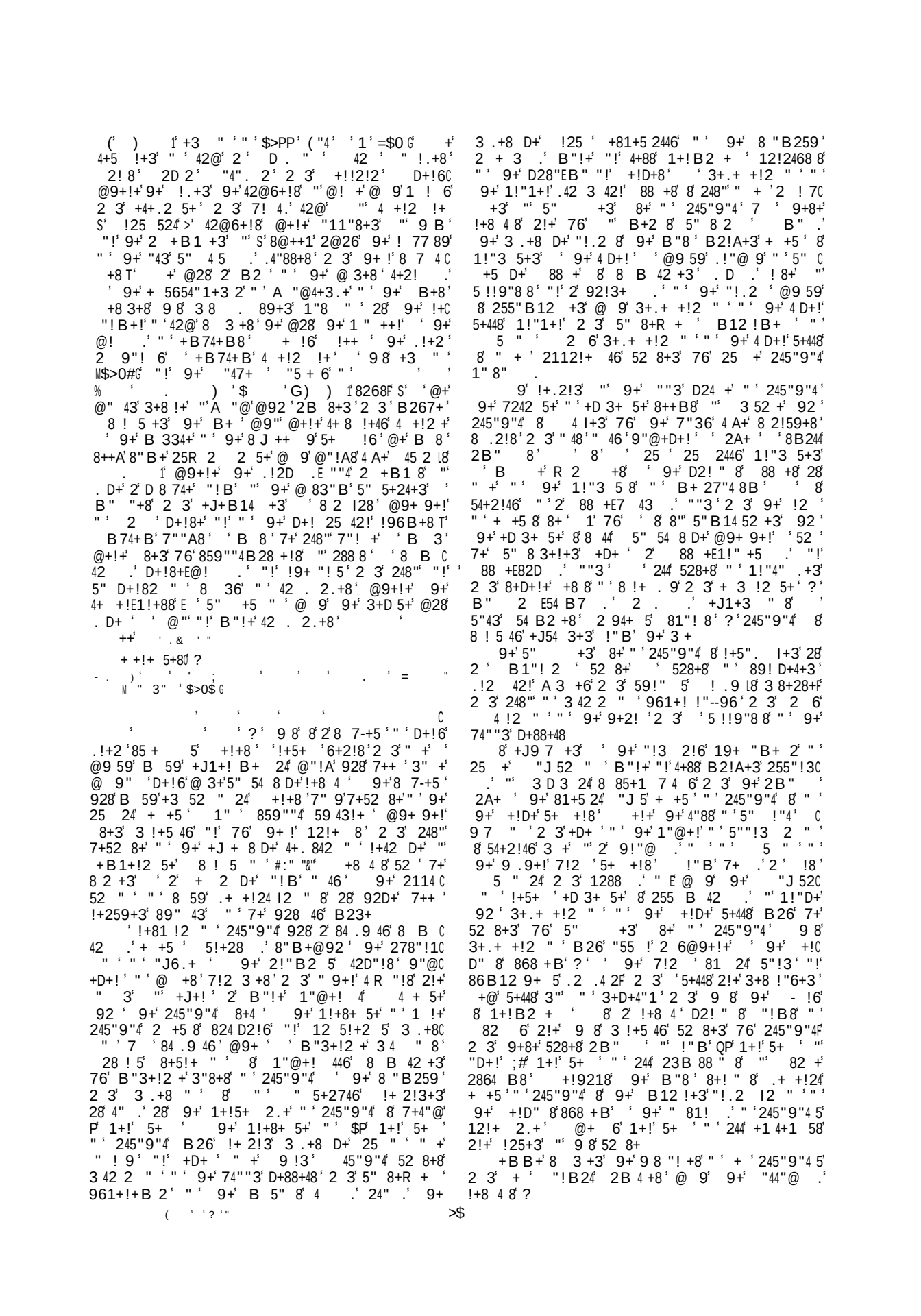
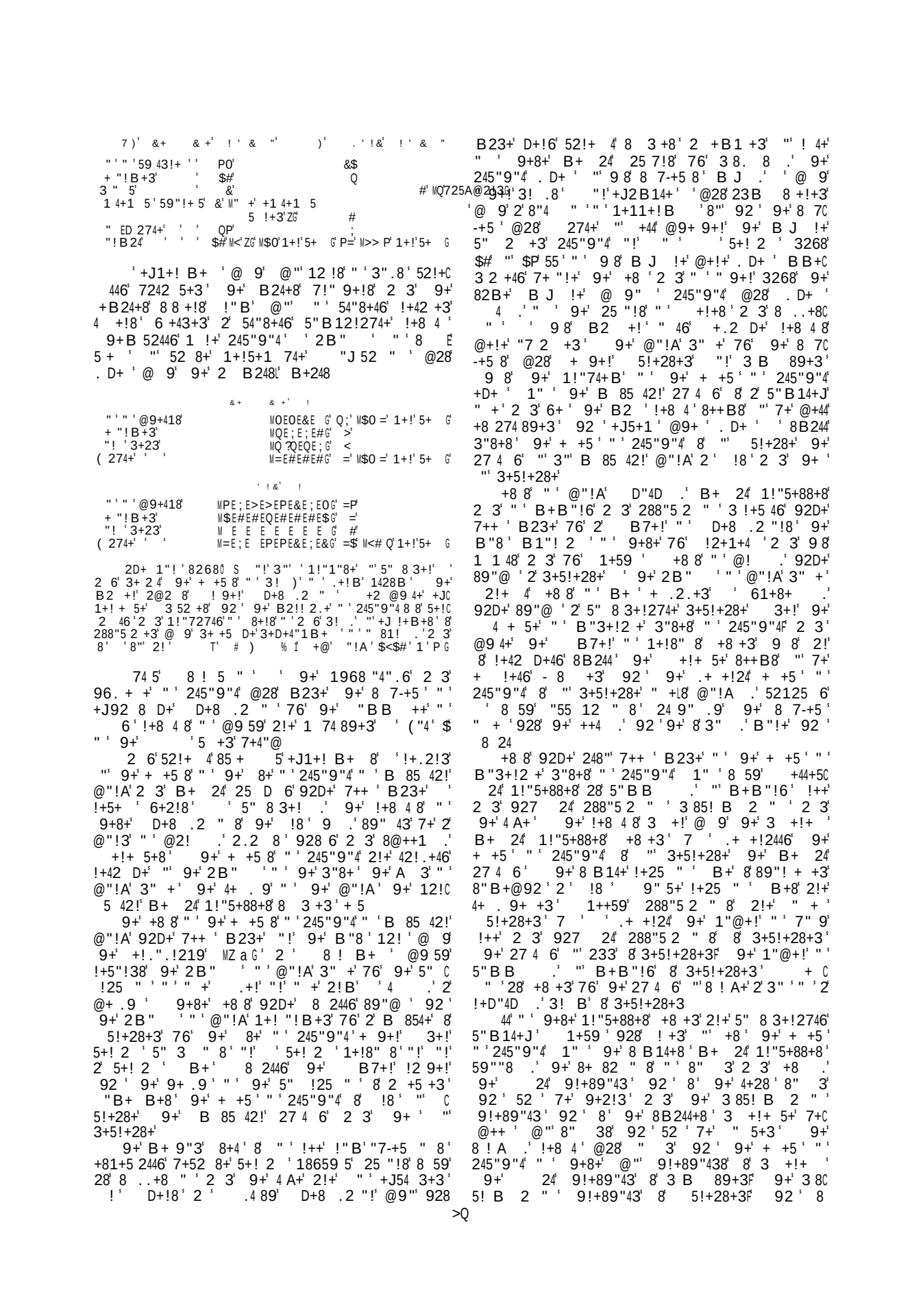
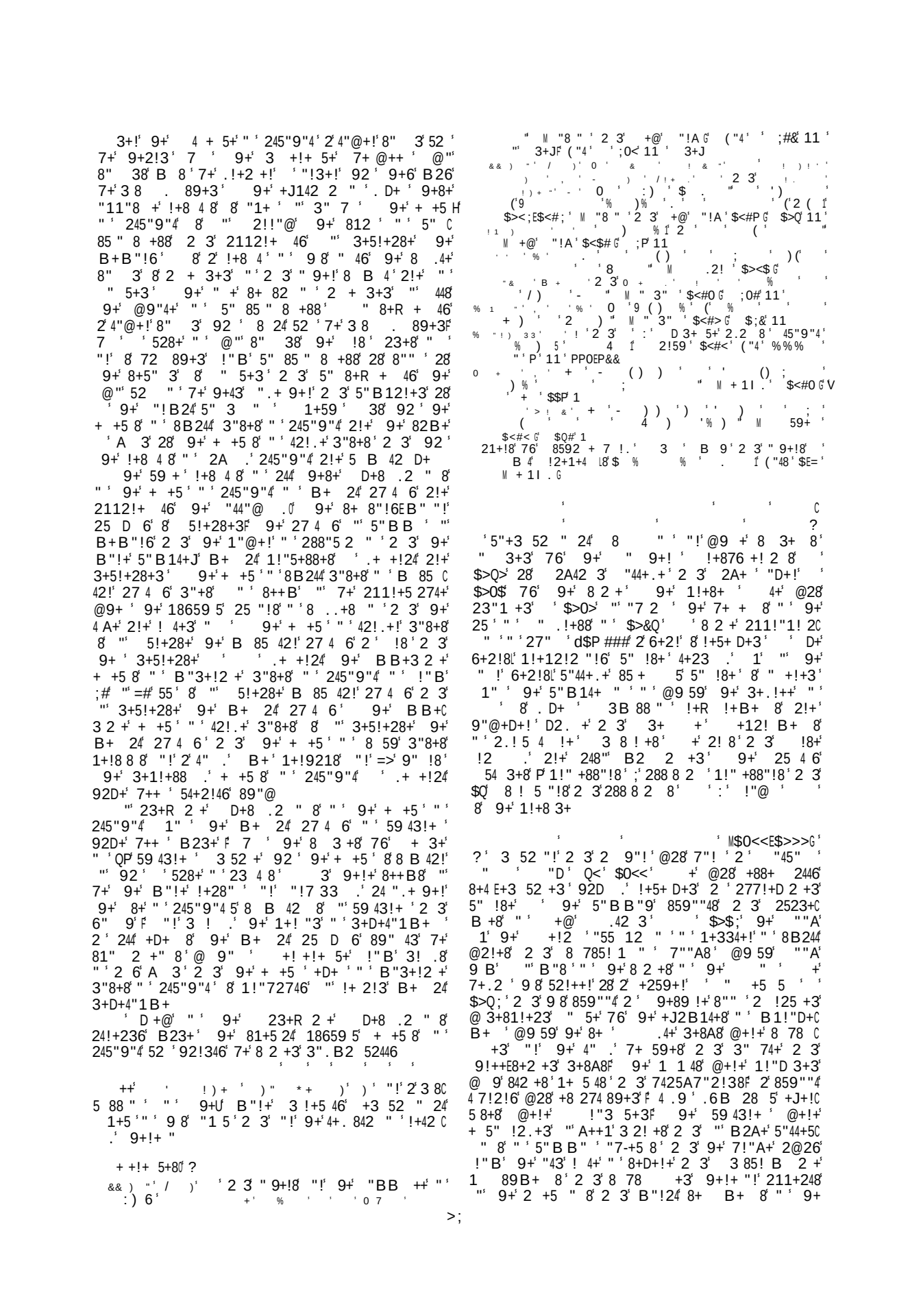
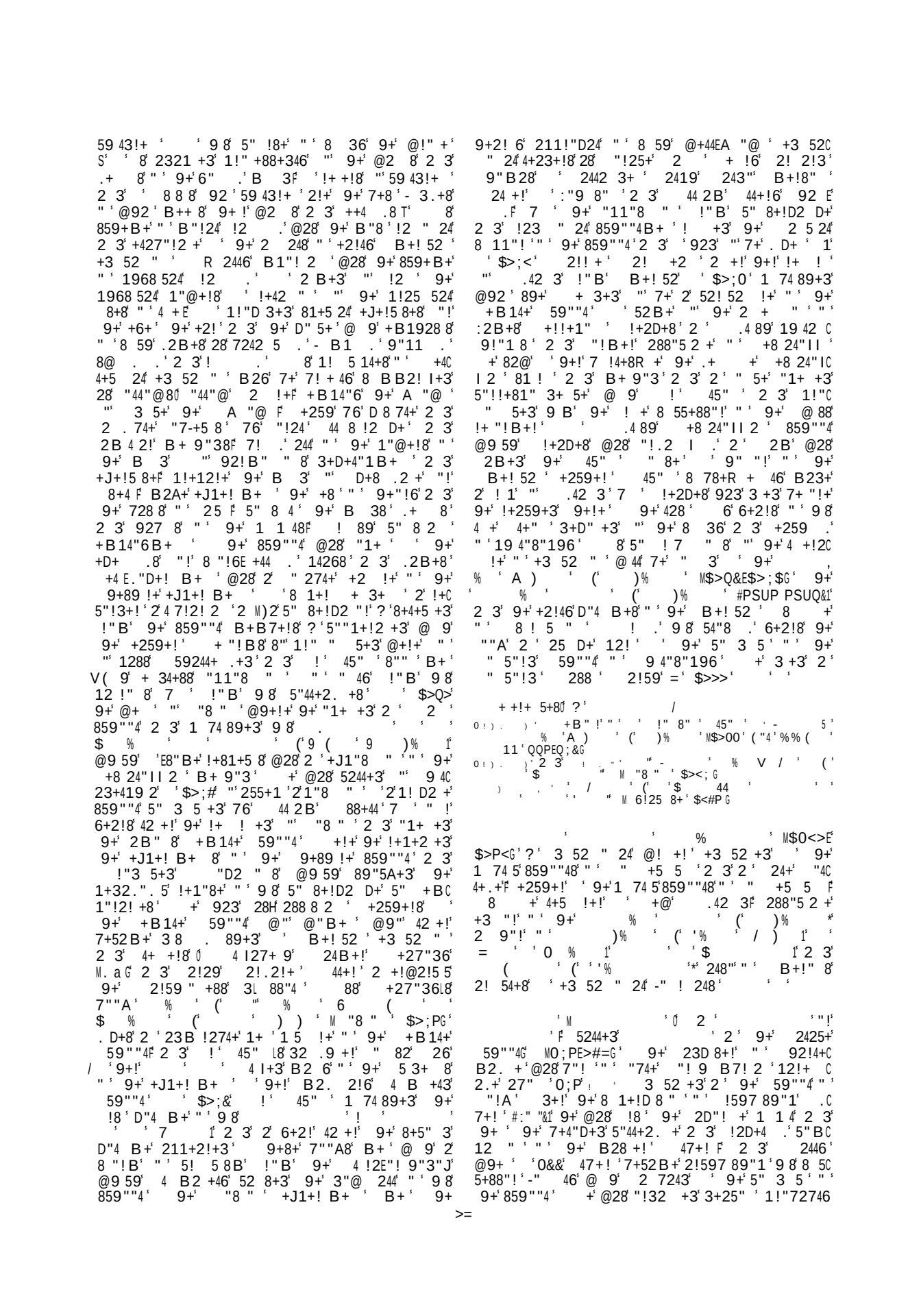


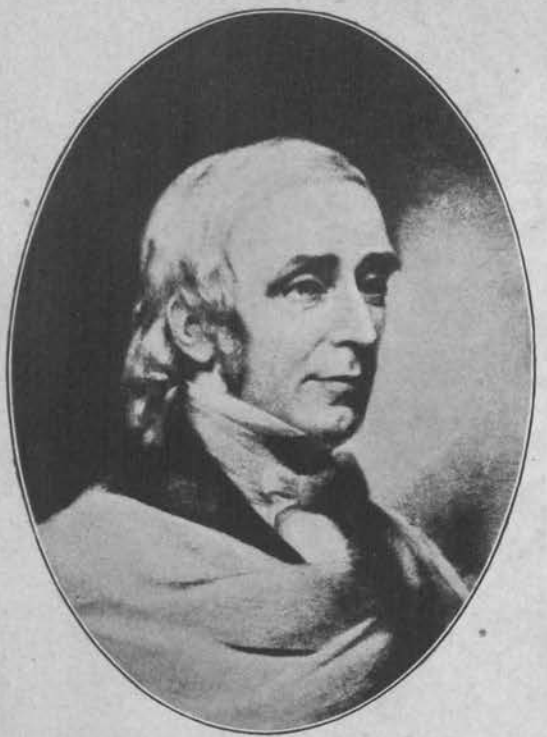












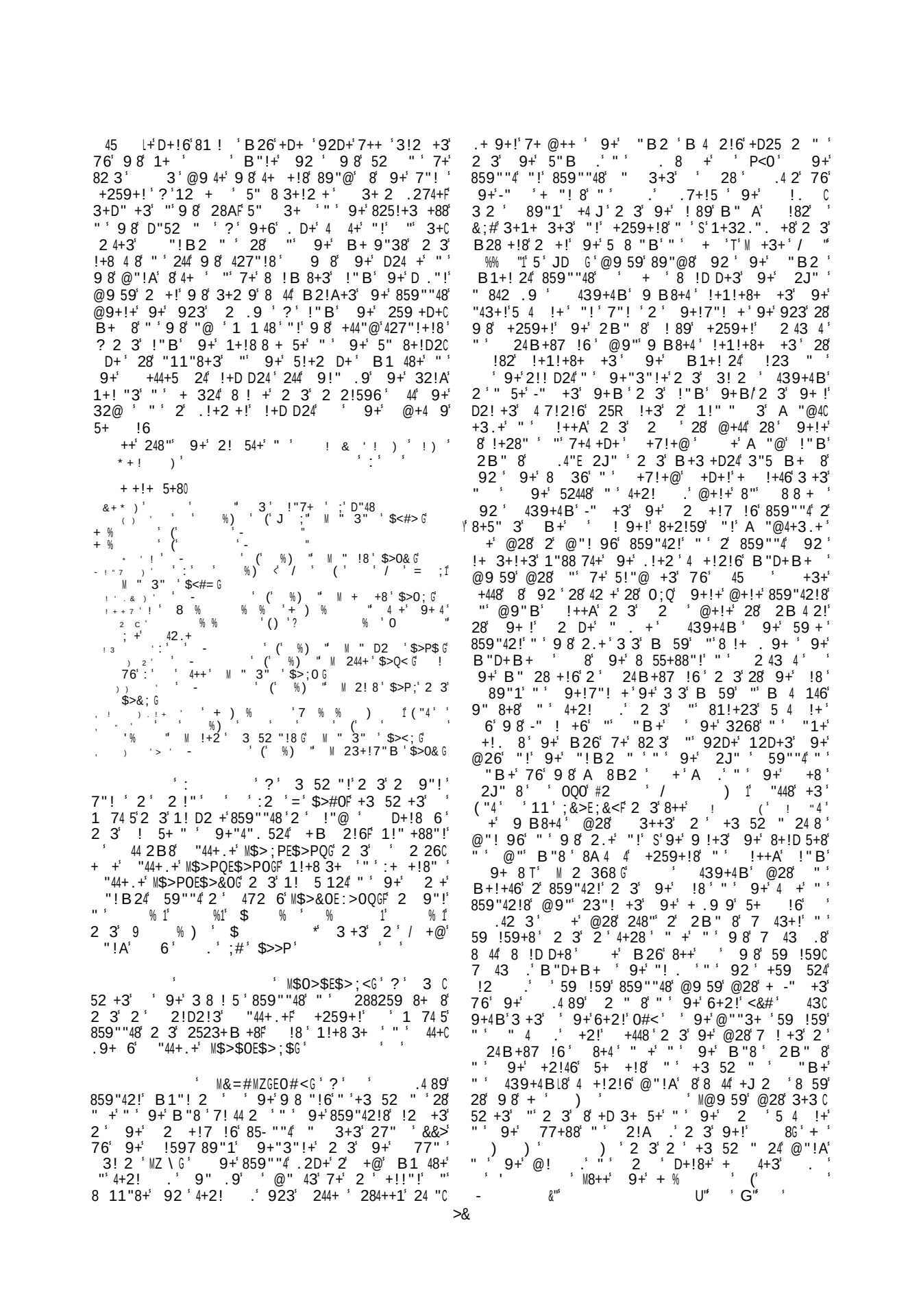
A. Bronson Alcott.

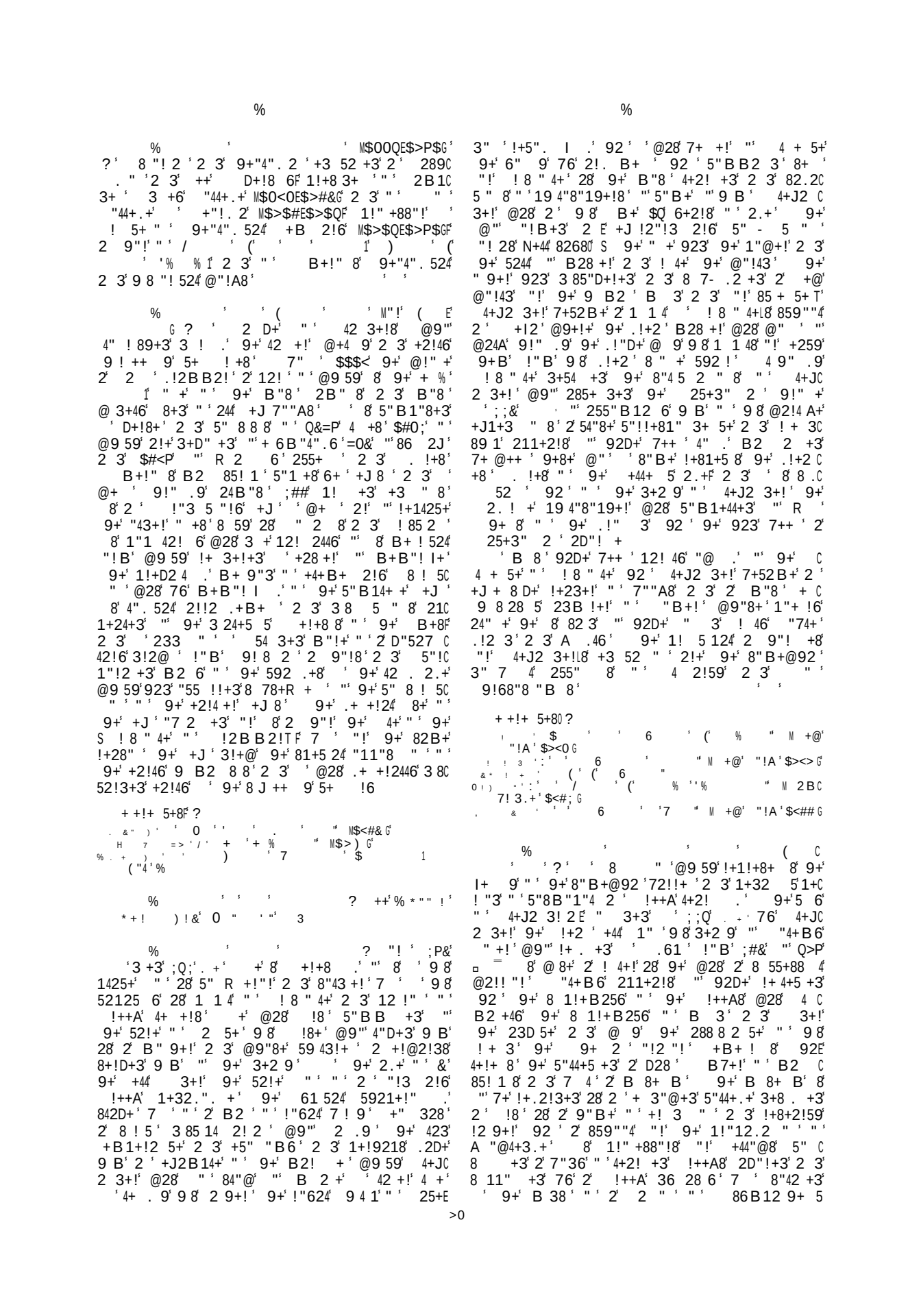
William A. Alcott.

Lord Brougham.

Dr. Andrew Bell.

EARLY NINETEENTH CENTURY EDUCATORS.





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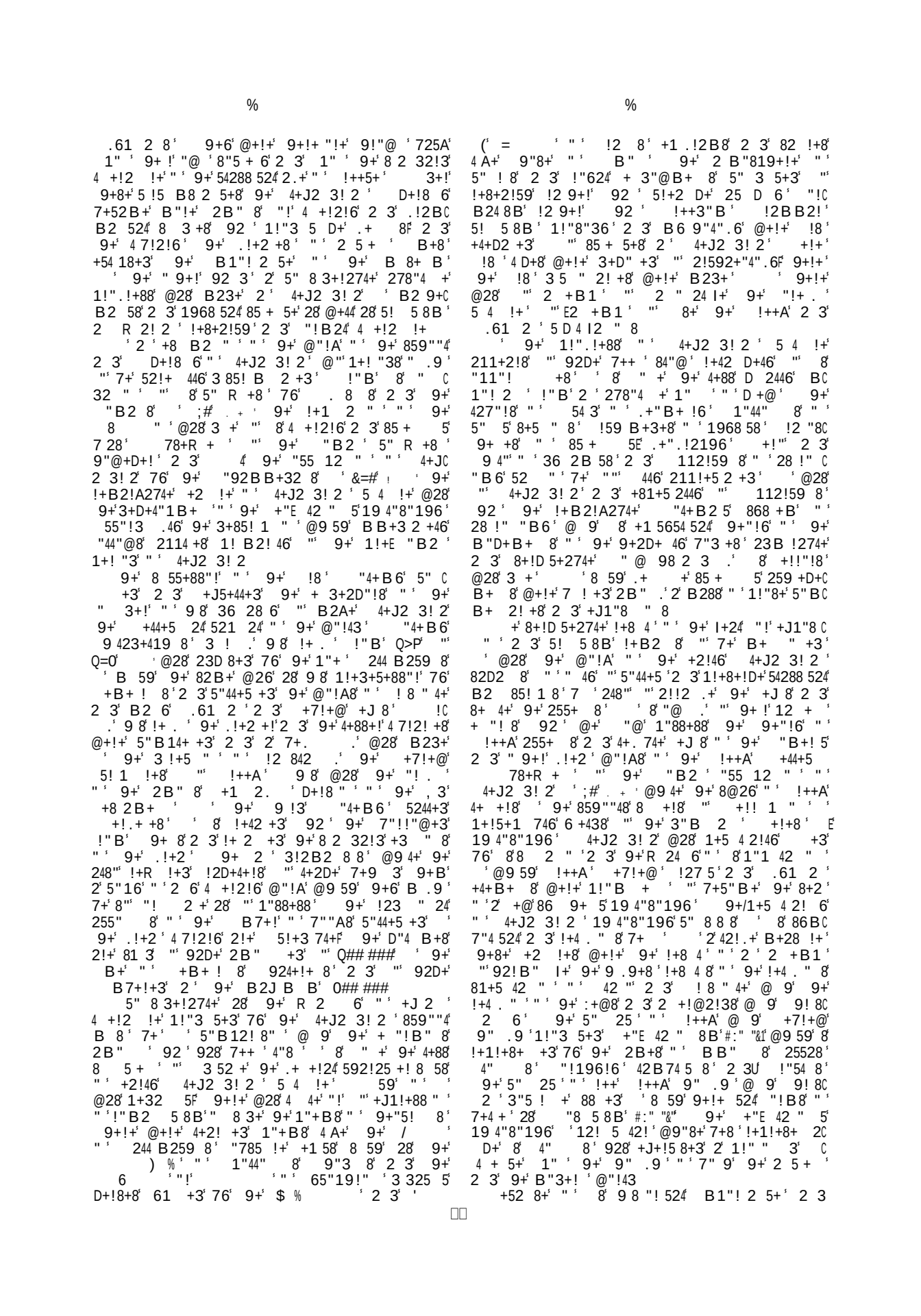
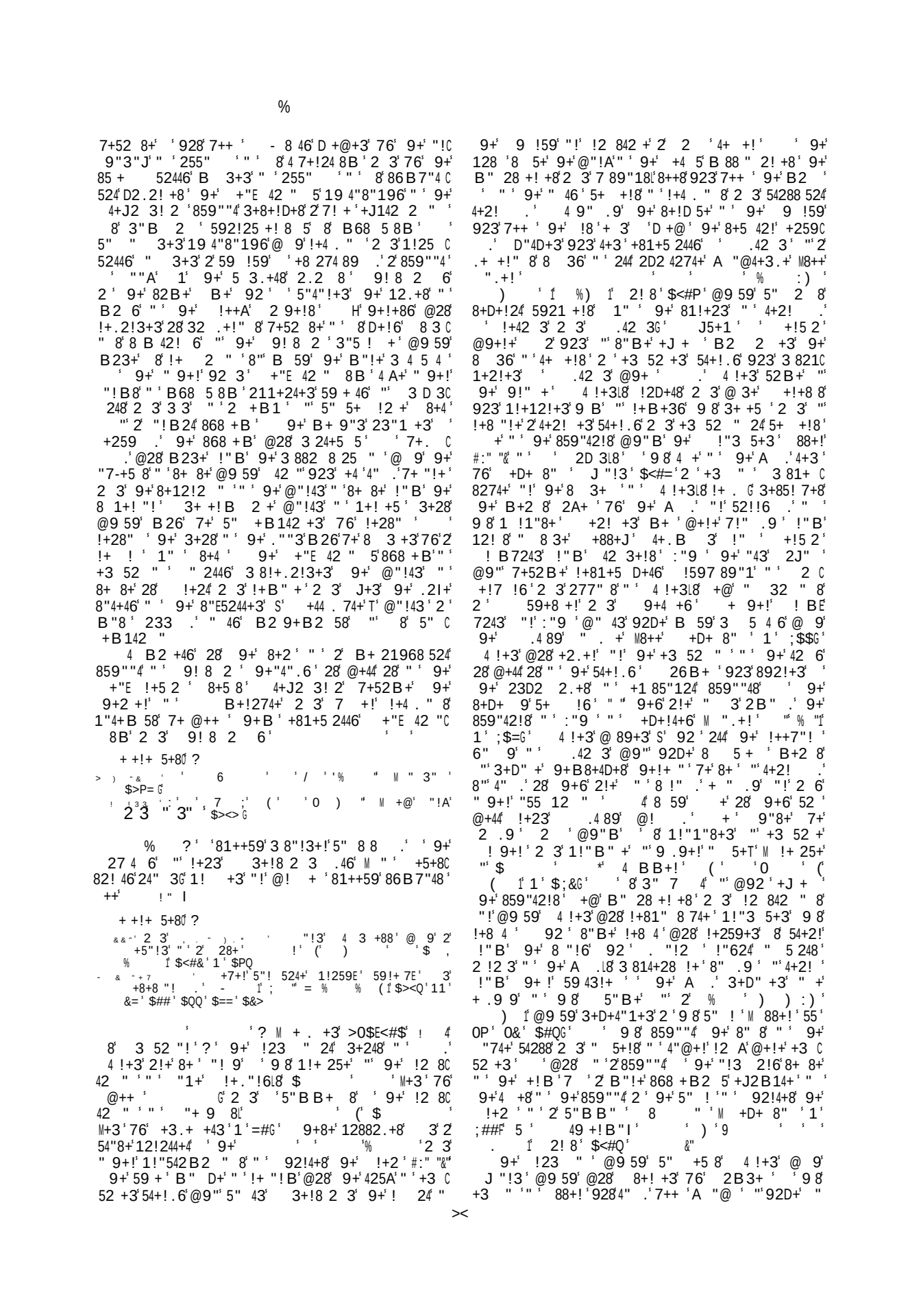
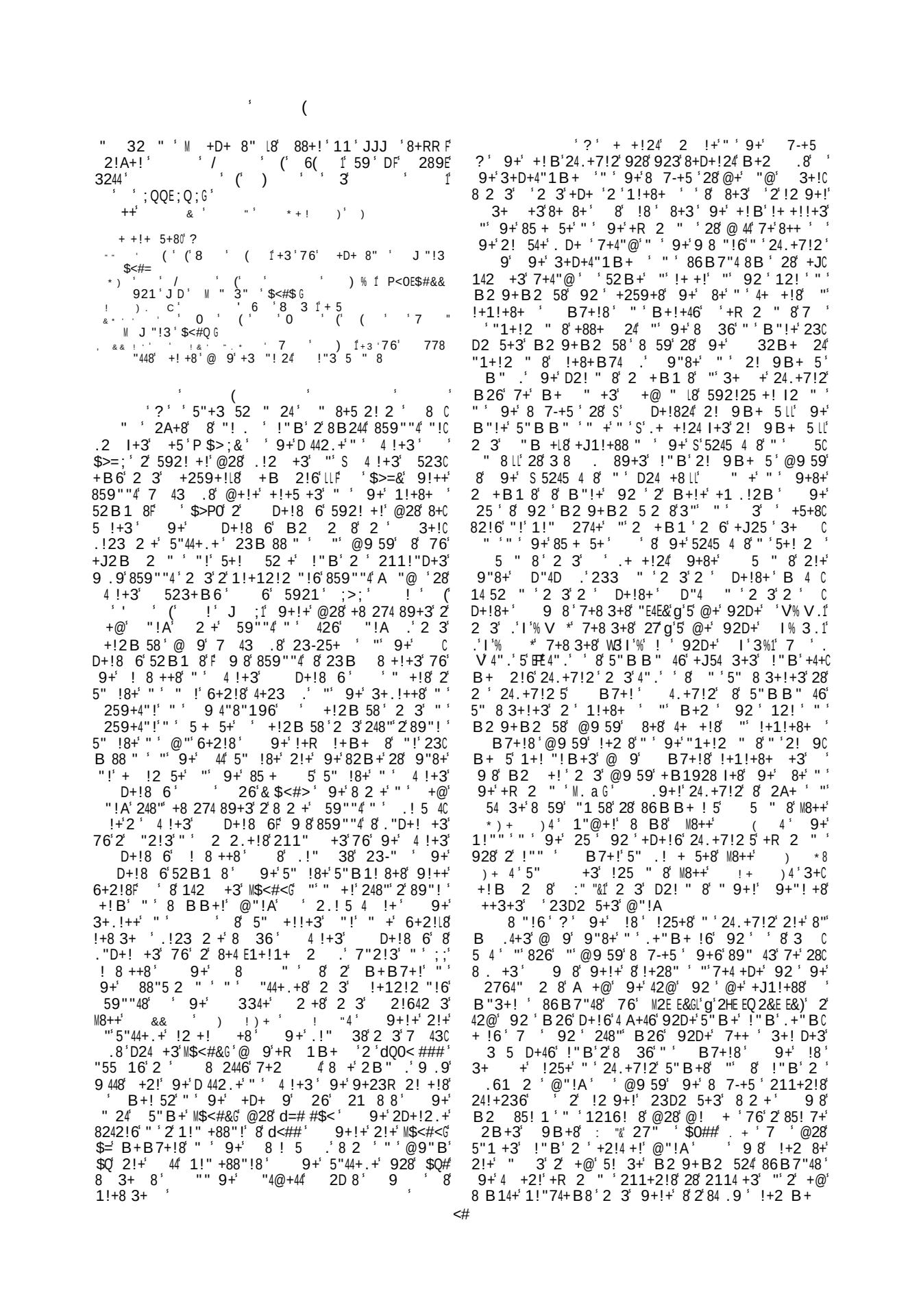






ALGEBRA

of arithmetical and geometric progressions. The first equation known appears in this work in the form "Heap, its seventh, its whole, it makes 19," and this in modern symbols would appear as $\frac{x}{7} + x = 19$.

The algebra of the golden age of Greek mathematics was merely a phase of geometry. Aristotle went so far as to represent quantities by letters of the alphabet, saying, "If A is the moving force, B that which is moved, Γ the distance, and Δ the time," etc., but such literal notation was exceptional at that period. In general the algebraic knowledge of the Greeks of that time was confined to such theorems as could be developed by geometry. In this way they were aware of the truths which we would now express by

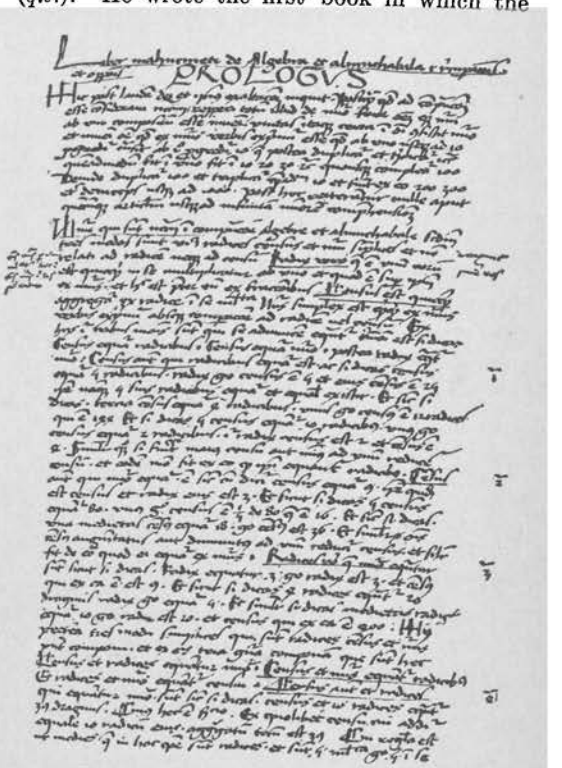
$$(a+b)^2 = a^2 + 2ab + b^2,$$
$$(a-b)^2 = a^2 - 2ab + b^2,$$
$$(a+b)(a-b) = a^2 - b^2,$$

and this involved a knowledge of how to "complete the square," that is, of adding b^2 to $a^2 \pm 2ab$.

The greatest algebraist of Greece was Diophantus (*q.v.*), who lived about 275 A.D. He used special symbols for the unknown quantity, and also for its various powers so far as he needed to use them. The unknown was a symbol, the meaning of which is not certain, but it resembled a final sigma, ς. The powers from 2 to 6 were represented by δ^{υ}, κ^{υ}, $\delta\delta^{\upsilon}$, $\delta\kappa^{\upsilon}$, $\kappa\kappa^{\upsilon}$, for δύναμις, κύβος, etc., a symbolism that was not improved upon until the time of Descartes (*q.v.*). The interest of Diophantus was largely in indeterminate equations (*q.v.*), but he could solve the quadratic equation and special forms of the cubic. His work differs notably from that of his known predecessors in being analytic rather than geometric, and from that of the oriental writers who came after him by being confined to pure mathematics.

Algebra next flourished almost exclusively in the East. In India there were four great writers, Aryabhatta (*q.v.*), who lived about 500 A.D., Brahmagupta (*q.v.*), about 625 A.D., Mahāvīrārcārya (*q.v.*), about 850 A.D., and Bhaskara (*q.v.*), about 1150 A.D. Their works are in rhetorical form, *i.e.* with the problems written out at full length and with no symbols. The nature of the questions proposed by these oriental writers will be understood from the following problem from Mahāvīrārcāya: "One fourth of a herd of camels was seen in the forest; twice the square root of that herd had gone to the mountain slopes; and three times five camels remained on the bank of a river. What is the numerical measure of that herd of camels?"

Algebra next flourished in China and among the Arabs and Persians. The Chinese contributions have not been thoroughly studied, but those of the Arabs and Persians are well known. The leading writer of the Bagdad school was Mohammed ibn Musa al-Khowarazmi (*q.v.*), who flourished about 830 A.D., and whose name appears in the word *algorism* (*q.v.*). He wrote the first book in which the word algebra occurs, the title being *'ilm al-jabr wa'l muqābalah* (*the science of restoration and comparison*), a name that appeared in the Latin translations as *ludus algebrae almucgrabalaeque*, and in the sixteenth century English as *algiebar and almachabel*. Among the other oriental writers of note was Omar Khayyam (*q.v.*), whose work on the cubic equation was in advance of that of his predecessors.



Page of a Latin Manuscript of Al-Khowarazmi of 1456. (Plimpton Library.)

The first medieval writer of importance was Leonardo Fibonacci (*q.v.*), about 1200 A.D. In the sixteenth century algebra attracted much attention in Italy, and the cubic and quadratic equations were solved through the efforts of Tartaglia (*q.v.*), Cardan (*q.v.*), and their contemporaries. In Germany Rudolff (*q.v.*) and Stifel (*q.v.*) were the leaders in this period and assisted materially in perfecting the symbolic work. One of the Italian names for the subject at this time, *Arte maggiore*, comes from the late Latin *Ars major* and *Ars magna*, terms used to distinguish algebra from arithmetic (*Ars minor*). It was also called *La regola della cosa*, from *cosa*, the Italian for the Latin *res*, thing, which had been used for the unknown quantity.

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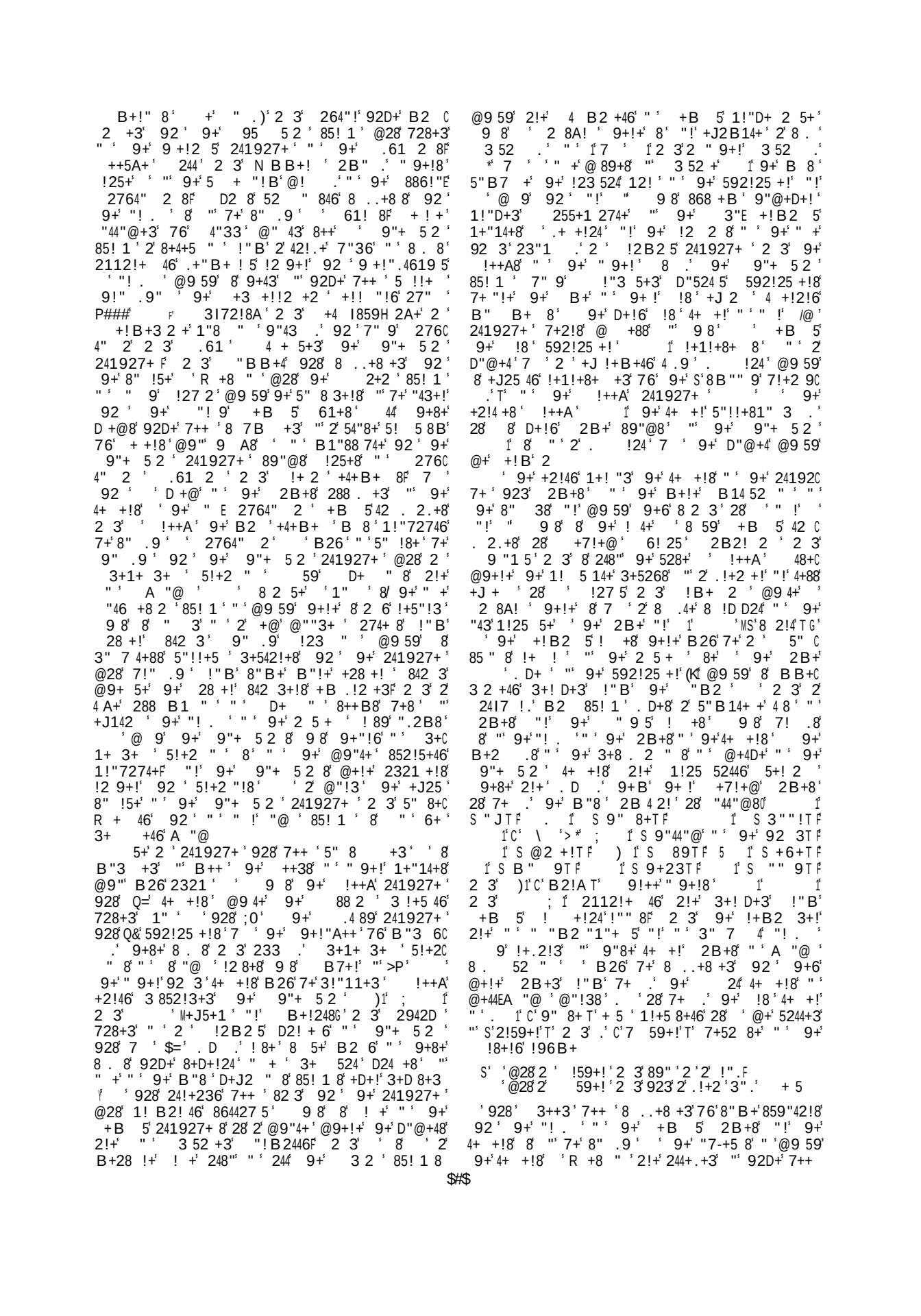

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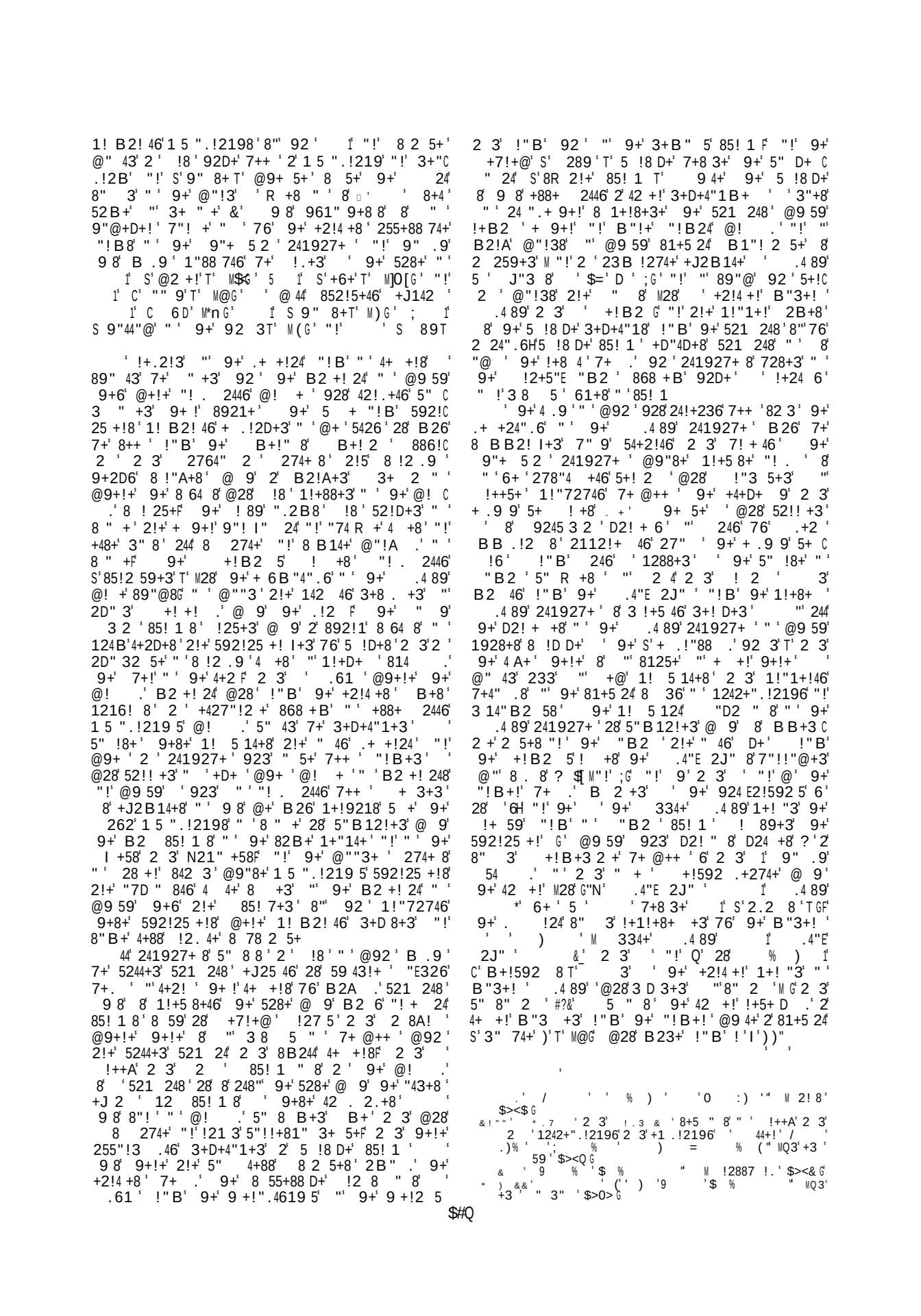
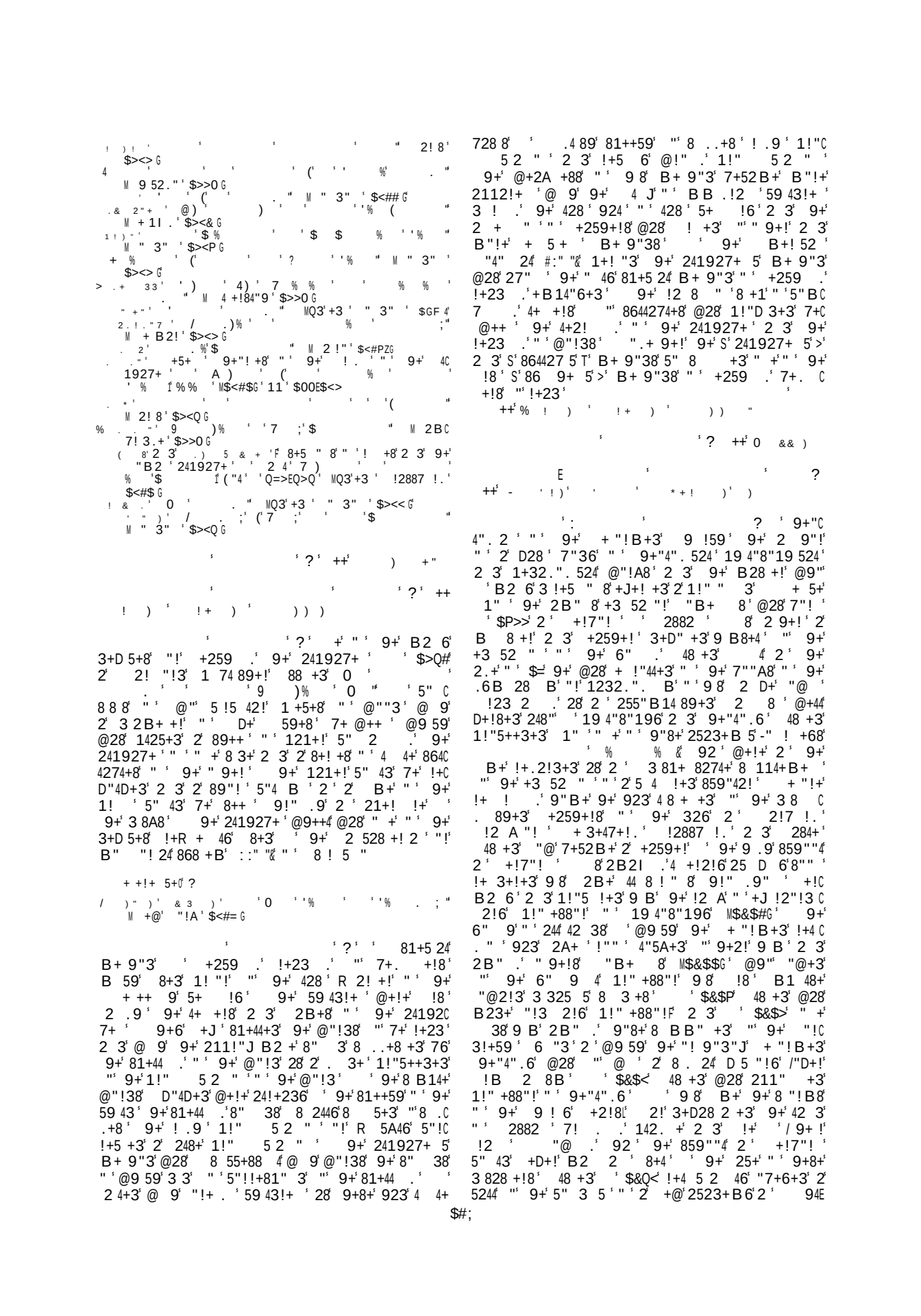




Weissenburg. Here he continued to produce book upon book, so that even his untimely death on November 9, 1638, did not prevent him from taking rank as one of the most prolific writers of any age.

Alsted was one of that noble-spirited band in whom the culture of antiquity, but recently made available by the scholars of the Renaissance, was happily united with the intense moral earnestness of the Reformation. Few had drunk more deeply at the springs of classical

learning; few were more zealous in doctrinal disputation or more fervent in religious faith. Education was to Alsted a branch of the history of culture and a handmaid of divine truth. His universal encyclopedia, in two folio volumes, published at Herborn in 1630, the most famous work of his pen and an undertaking that has scarcely a parallel, includes a treatment of education which is not merely of interest as an illustration of the theory, but also the practice of German education in that day. It is obvious that the books upon education, at least, were written with genuine love for the work, and not in a perfunctory spirit. Alsted's Nassau writings include no less than 120 volumes, several of which run each to more than a thousand pages. Consult *Johann Heinrich Alsted's pädagogisch-didaktische Reform-Bestrebungen, Lippert.*

P. R. C.

ALTDORF, THE UNIVERSITY OF. — Near Nuremberg, Bavaria; played a prominent rôle as a Protestant institution of learning during the seventeenth century. It owed its origin to a *Gymnasium* removed from Nuremberg to Altdorf in 1573, although the institution was not transformed into a university until 1622. Like so many of the other German universities established during the seventeenth century, it succumbed under the calamities that befell the German states during the period of the Napoleonic conquests, and closed its doors in 1807.

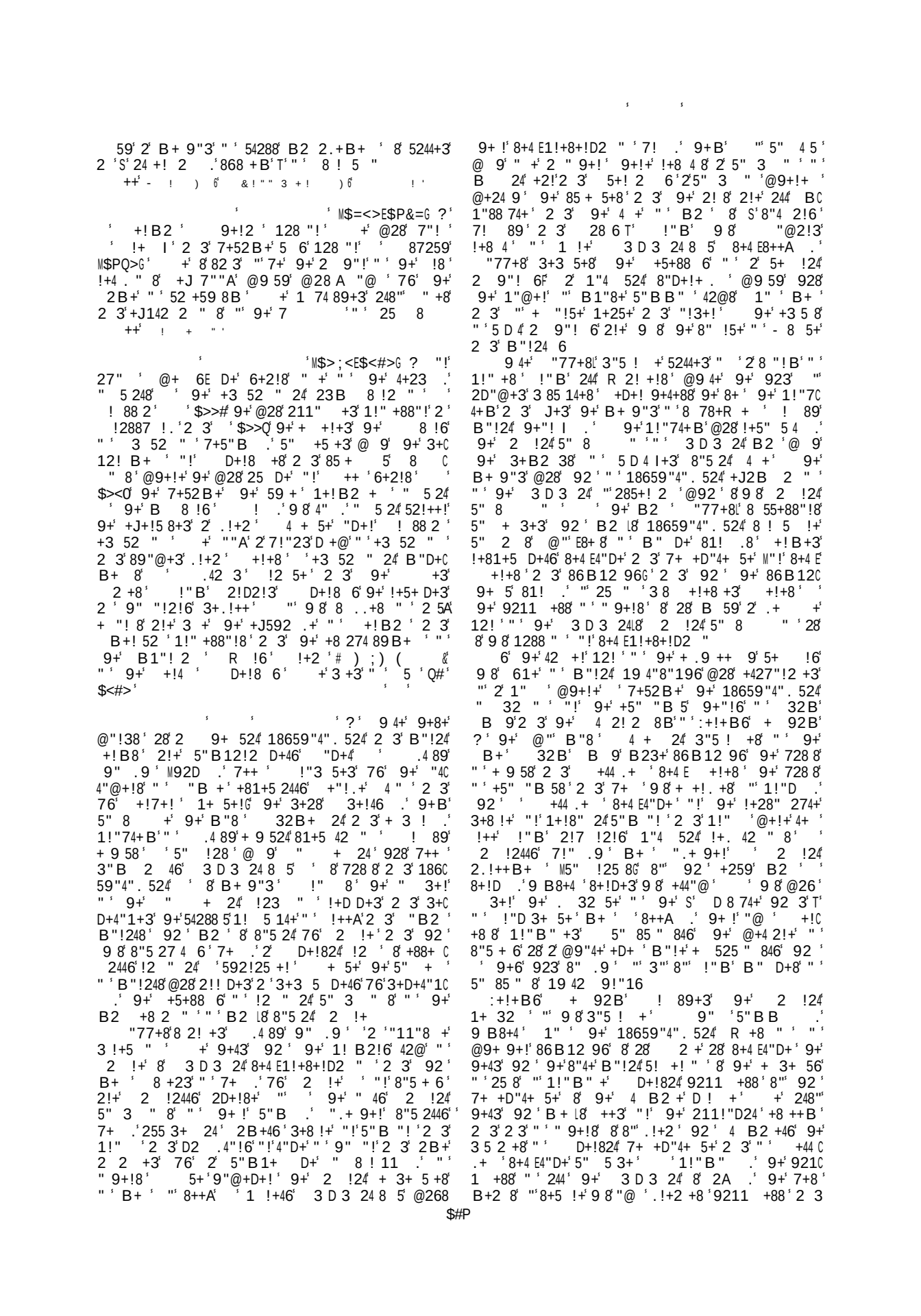
ALTENSTEIN, KARL FREIHERR VON STEIN ZUM (1770–1840). — The first Prussian Minister of Education. He was born in Ansbach, being a descendant of one of the oldest German families, studied law at the universities of Erlangen and Göttingen, and entered the Prussian administrative service, in which he rose very rapidly. After the resignation of Stein in 1808, he became minister of finances, and was practically at the head of the government until 1810. In this position he coöperated very effectively in the establishment of the University of Berlin. In 1817 he was called to the charge of the newly created Ministry of Education, which he directed until 1835, when he retired on account of old age.

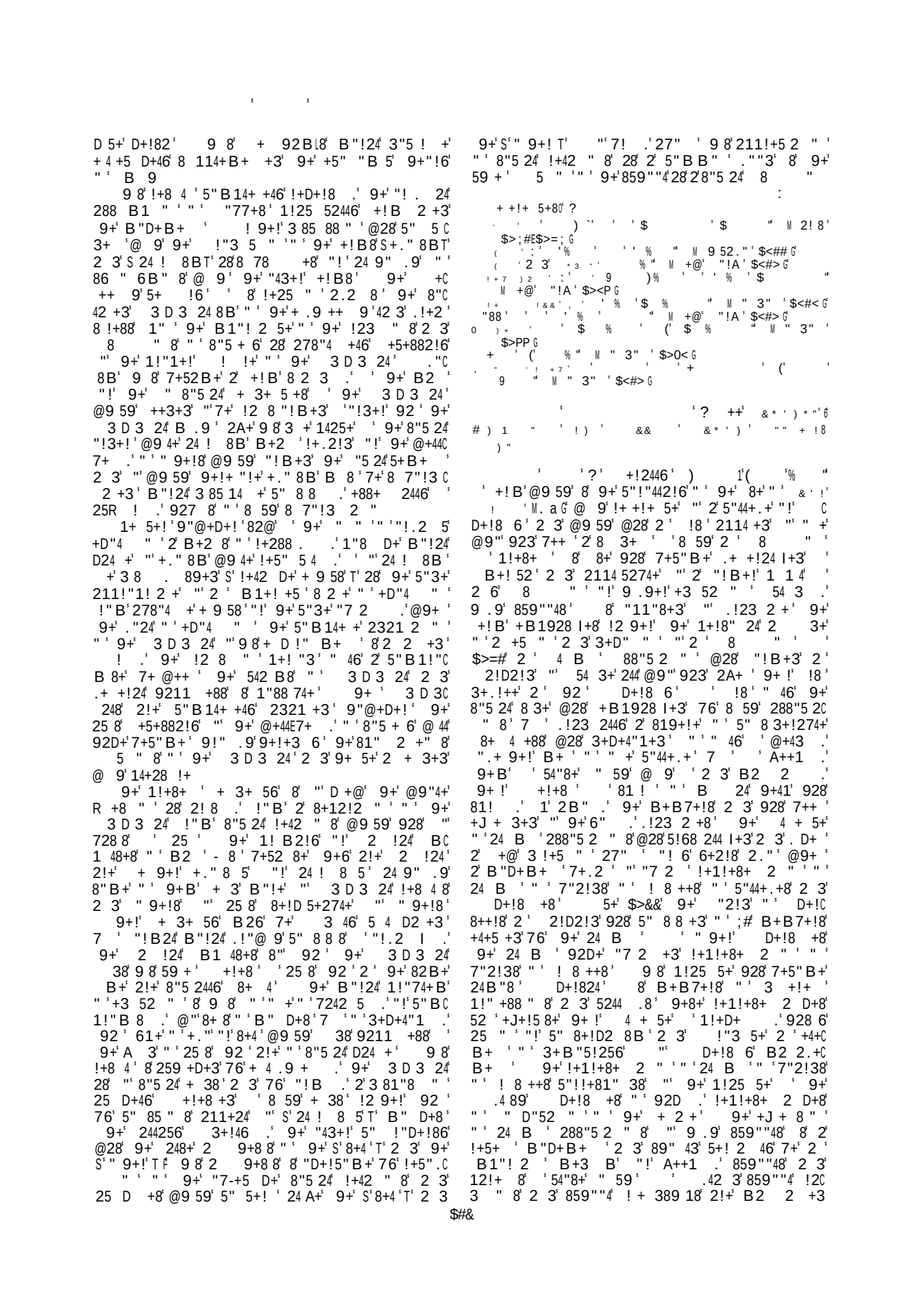
Altenstein's administration was of great influence on the development of the Prussian school system. He established the University of Bonn, as well as many new gymnasiums, teachers' seminaries, and other educational institutions. He tried to enforce the principle of compulsory education and to raise the income of the elementary teachers. The project of a general school law worked out under his direction in 1819 did not pass, but its principles were embodied in later legislation.

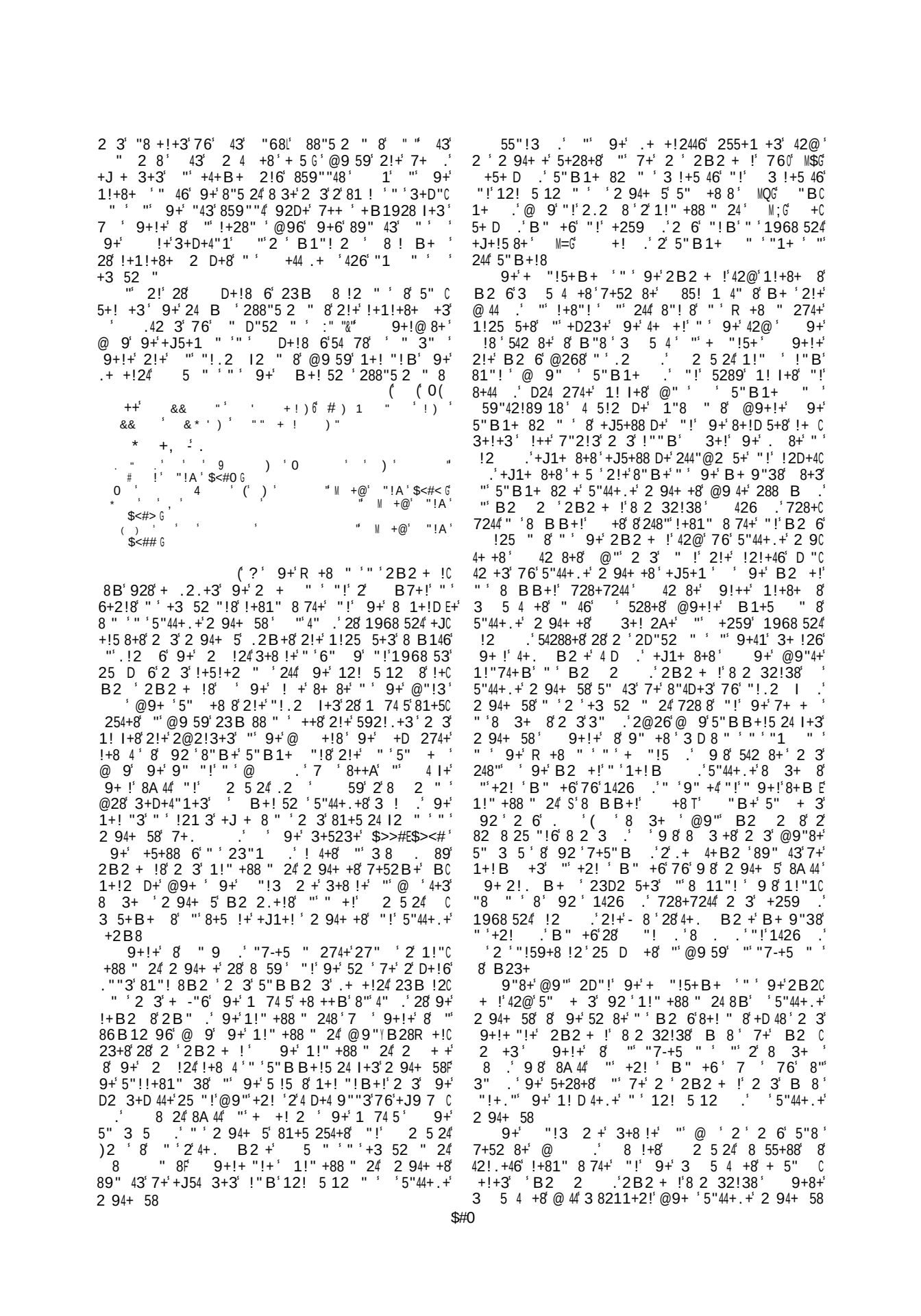
ALTERNATION OF STUDIES. — It is usual in arranging the succession of lesson periods to alternate between subjects more or less formal and strainful and those to a considerable degree objective and restful. Thus music, drawing, physical education, manual training, or nature study might follow and be followed by arithmetic, history, grammar, etc. Such a succession, designed to relieve strain and fatigue through recreation or change, is spoken of as an "alternation of studies."

See PROGRAM; SCHEDULE.

ALTERNATING SYSTEM. — In an ungraded school with several divisions or groups it is necessary for the teacher to give his class instruction to the groups in alternation. Even in city schools, where only one grade is under the control of a single teacher, it is frequently required that the children of the single grade be divided into two groups, which are to have the major attention of the teacher alternately. When one group is reciting, the other studies.







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9+ 52 8+8 " 9+8+ 5" 3 " 8 2!+ 1!"72746 " 7+ " 3 9+! +3 +!D" 8 8 ! 5 !+8 @9 59 ! 8++B " 7+ D+!6 54"8+46 !+42 +3 " 9+! +3 5 !5 42 "!6 "!.2 8 9+ @" 8 3+8 " 9+ 7!2 !+5+ D+ 9+ !74""3 8 1146 9!" .9 2! +! +8 @9 59 2!+ 28P B+ ! 524 9+!+ 9+ 74""3 8 1146 8 42!.+! " 9+ 4+ 8 3+ " 9+ 7!2 9+! .9 92 3 8 2 !2446 3+D+4"1+3 " 2 9 .9+! 3+.!++ " 3+J +! 6 @9+!+ 9+! .9 8 3+ " 9+ 7!2 !+5+ D+8 9+ .!+2 +8 74""3 8 1146 9+ 1+!8" 8 2 !2446 4+ E92 3+3 J+!5 8+ B 26 92D+ 8"B + +5 J .9 8 !+42 " 2 3 +J 2..+!2 .9+3+.!++ " +E8 3+3 3+D+4"1B + 7 9+ 9+! +3 8 ! 5 !+8 2!+ 3" 7 4+88 " 9+ !8 B1"! 2 5+

9+ R +8 " @92 A 3 " ! 2 .D+ 4+ E92 3+3 59 43!+ 8 D"4D+3 76 9+ .+ +!2 25 92 244 9+ 5" D+ " 8 " 4 +2!+ 23- 8 +3 " 9+ 288 B1 " 92 ! .9 E92 3+3 +88 8 " " 46 B "!+ 5"B B" 7 B"!+ 2 !24 44 @! .!+J2B14+ 8 2321 +3 "! .9 E92 3+3 B2 1 42 " 9+ 7+8 1!25 524 ! 4+ 9+!+ "!+ @" 43 8++B " 7+ 9 8 2 59 43 8 8" 4 4+ 1!+3 81"8+3 "@2!3 4+ E92 3+3 +88 92 8"B + + "! @ 9 B " 9+ 5"B B" B"3+ " 25 " 8 7+ +!" "!' 9 B " 7+ !2 +3 ! .9 E92 3+= B"D+B+ 8 " " 9+ " 9+! 92 3 9+ 8 +J !+B+46 4+ E92 3+3 8 4+ " 2 +B1 " 592 .+ 9 8 9+! +3 B"3+ " 25 DC 6 B7 3+J +! 6 8 " 2 2 !24 ."24 " 3+D+4"1B + +92 3 " 46 8 !+R !+3 "!

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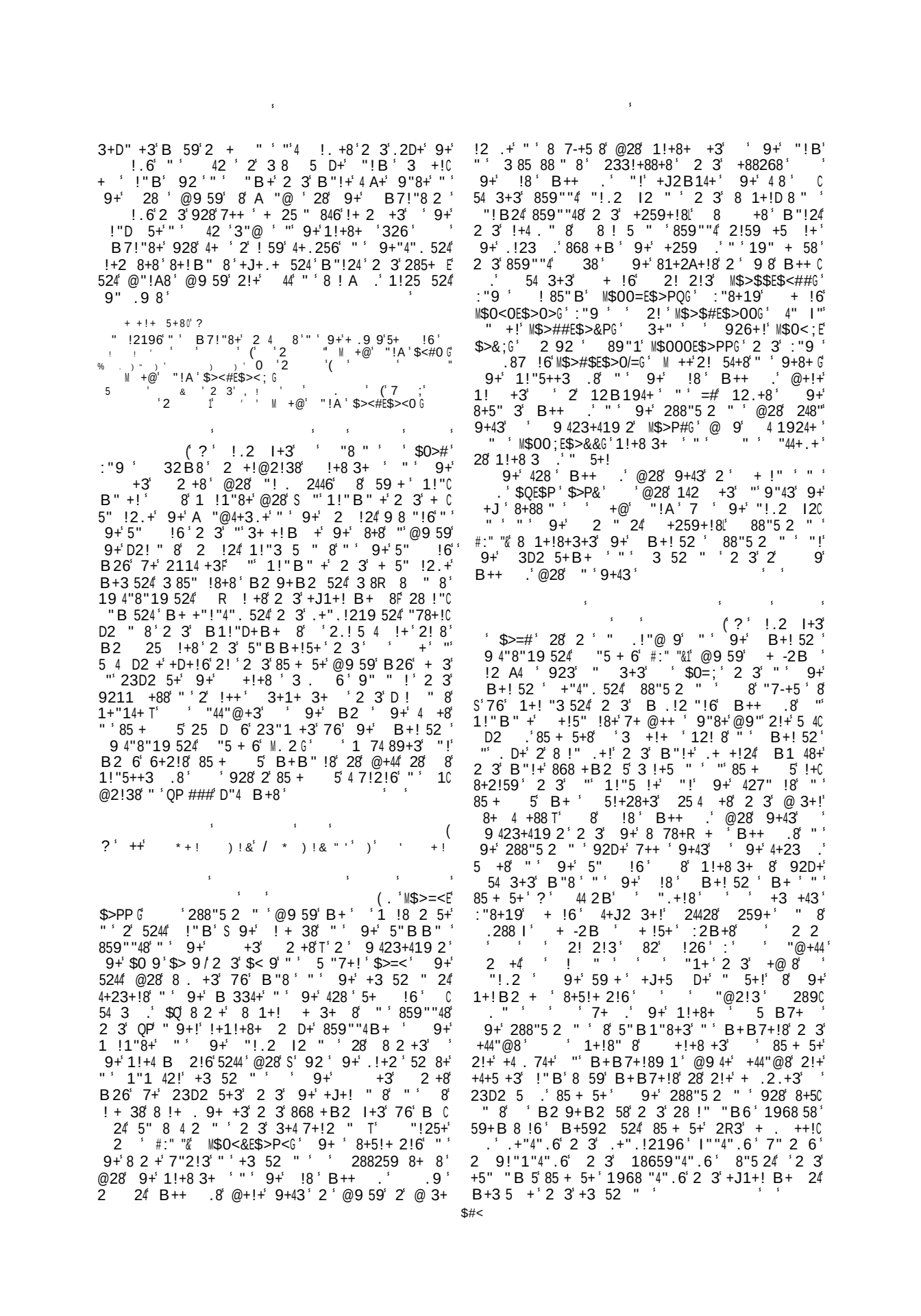

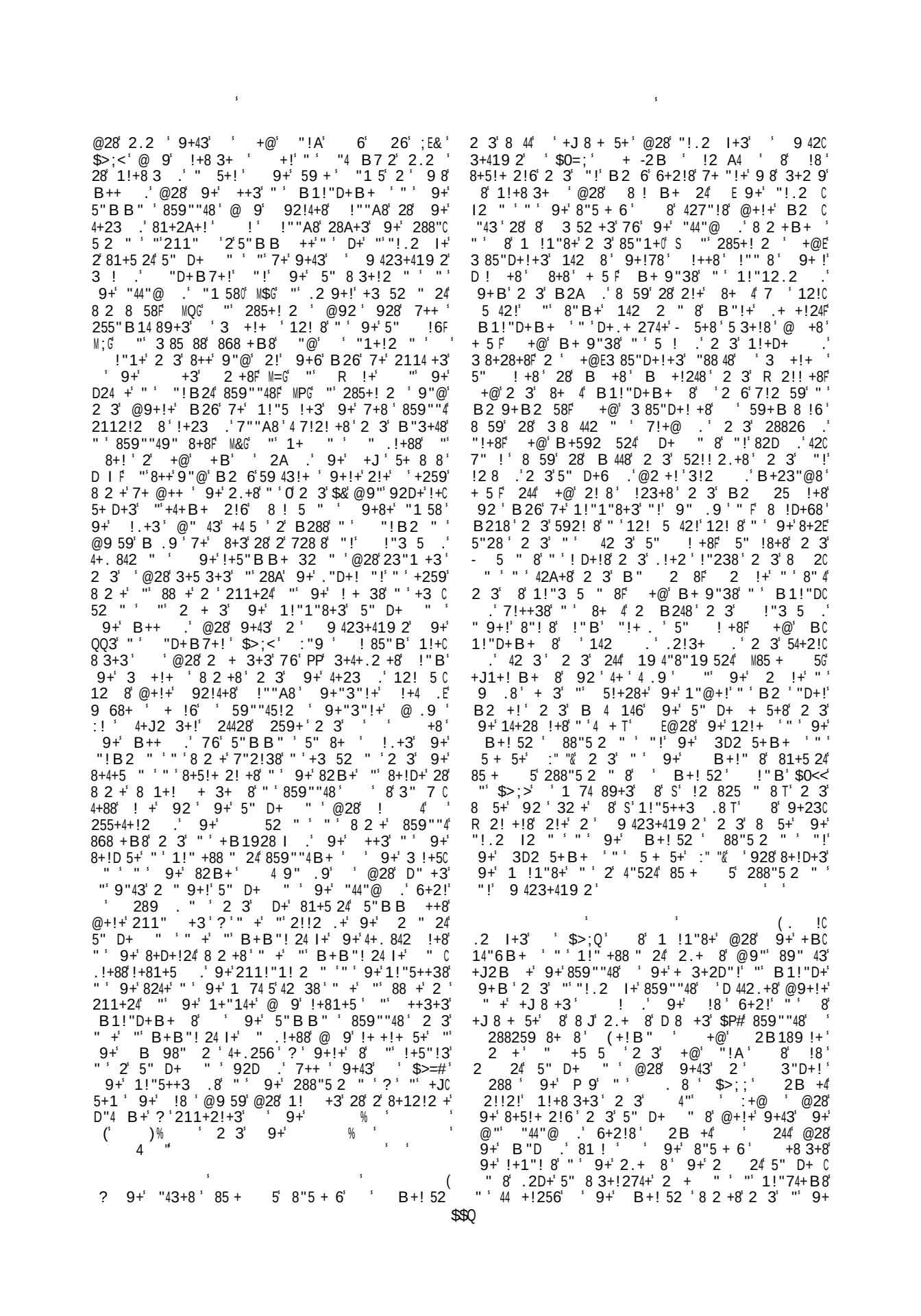

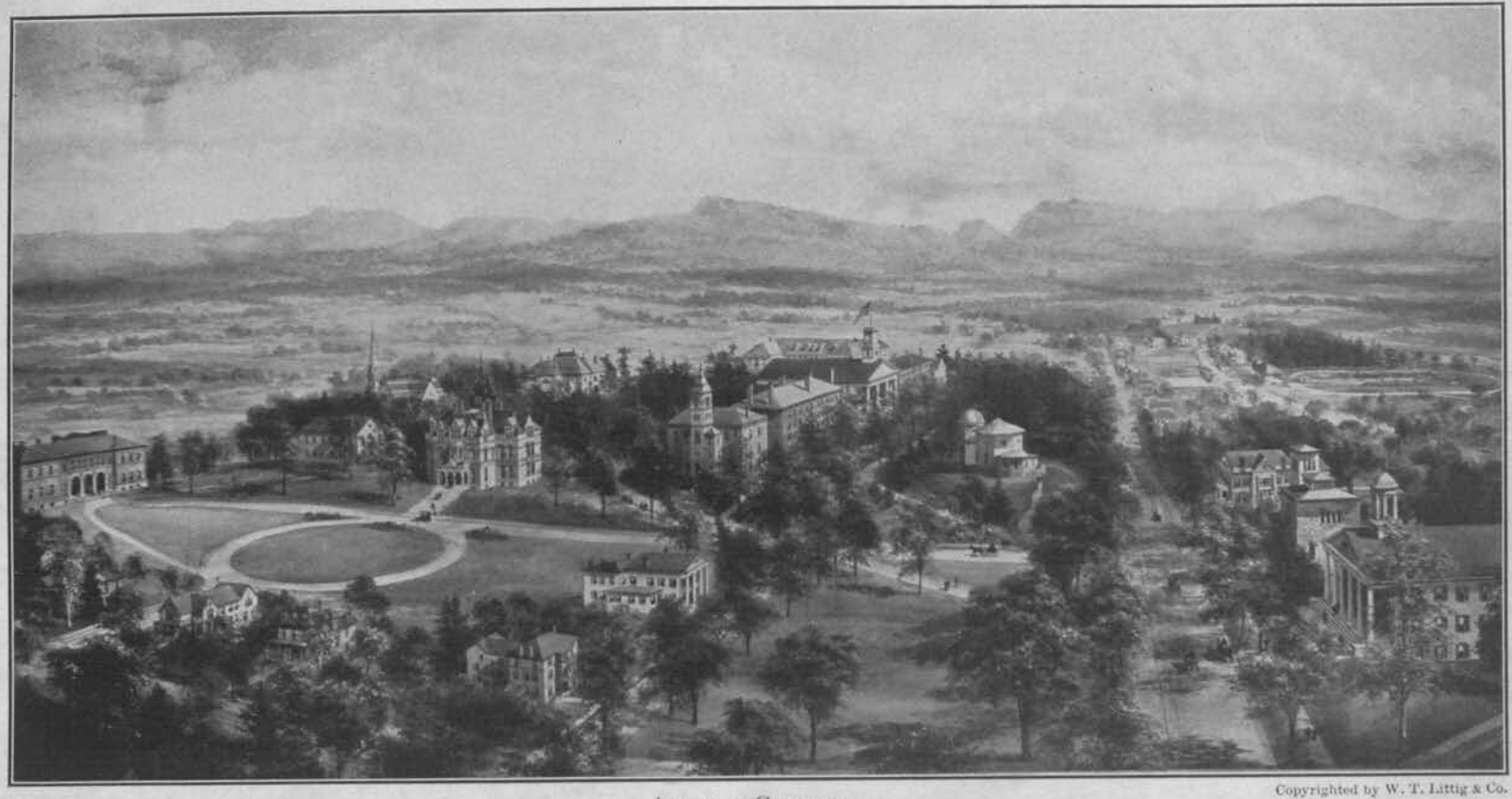

AMHERST COLLEGE.

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23+R 256' " ' +J 7""A8' "!' 8+' '+4+B+ 2!6' 859""48' B" .' 9+8+' 7+8 3+8' 2B +4' ' 244' @9"' ""A' 2 ' 25 D+' 12!' ' 9+' 2 24' B++ .8' " ' 9+' 8"5 + 6 ' @+!+' !2 5 8' 2642 3 ' :25"7' 77" ' 44 2B' ' ""37! 3.+ ' :"8 29' "47!""A' 44 2B' ' 45" ' 8' 9"2 + ' 2 3' 9"B 28 ' 2442 3+ ' : :" "&" 9+' @"!A' " ' 9+' 8"5 + 6' @28' 8 78+R + 46' 2A+ ' "D+!' 76' 9+' B+! 52 ' 65+ B' 88"5 2 " ' #:" "&" ' '

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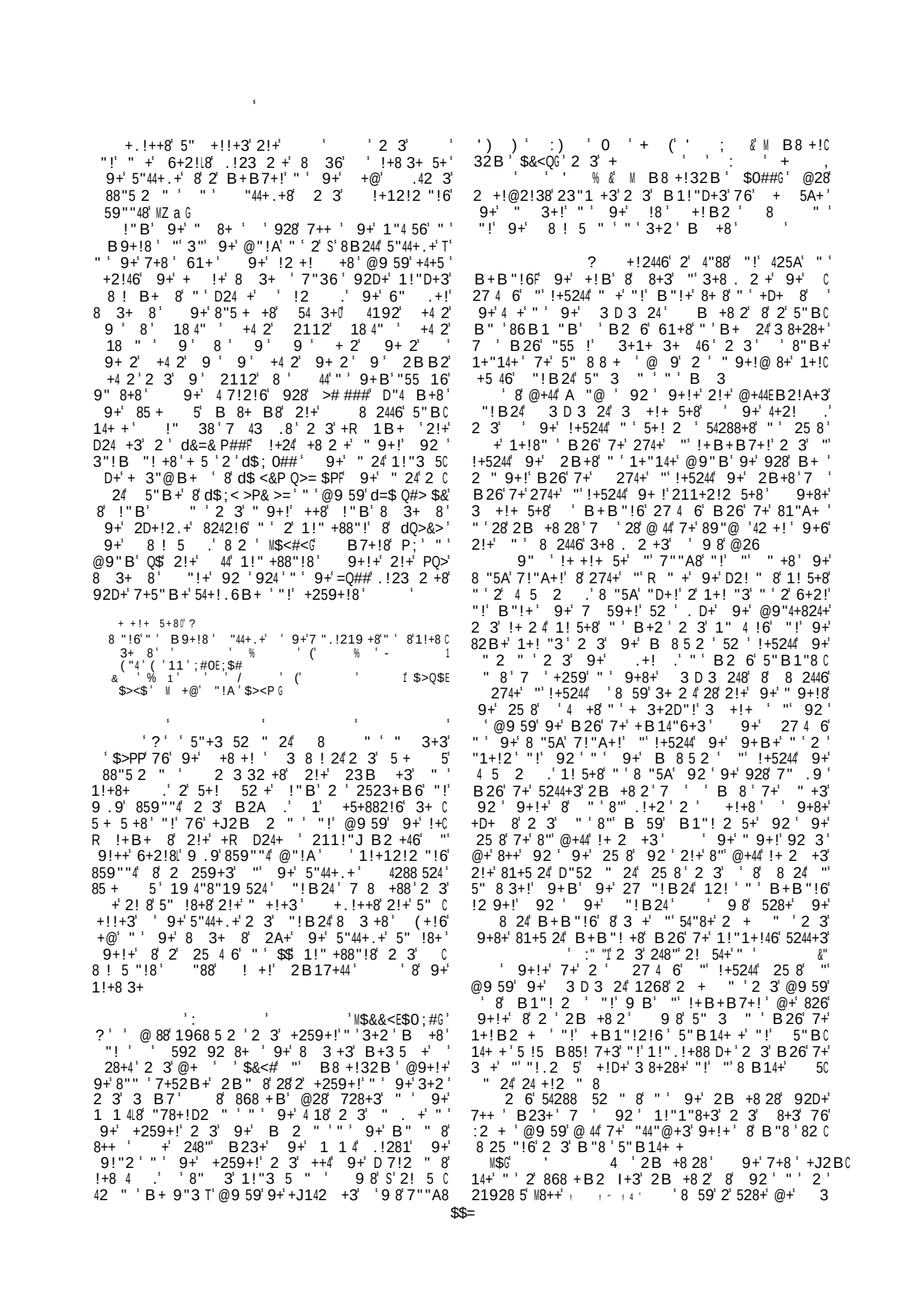
?' ' 8 " ' @9 59' ""A' 8' "! . ' !"B' B 9+!8 ' 523+B 6 ' " 3+3' ' $>$=' " +' " ' 9+' 42!.+8 ' " ' 9+' +2!46' +@' .42 3' 859""48' ' "D ' >' $>$0 ' 9+' ! 8 ++8' " ' 9 8' 2523C +B 6 ' 23"1 .' 9+' 8 ..+8 " ' " ' 8' !2D+8 ' " +' " ' 9+ !' B7+!' D" +3' "' +8 27C 4 89' 2' S' 592! 6' 3' T' "!' 9+' !2 .' " ' 3 C .+ ' 52 3 32 +8' "!' 9+' B 8 !6' 1" ' 9+' 2 4 !+' " ' 9+' "! . 24' 142 ' @9 59' D"4D+3' " 46' 9+' 211" B+ ' " ' 2' 1!" +88"!' 8' !2D+8' 5 !5 42 +3' 2' 1!"1"824' "!' 2' 3' " ' dP# ### "' 7+' 8+3' ' 9+' +8 274 89 B+ ' " ' 2' S 92! 6' 8 " T' ' 26' >' $>Q$' 9+' +D ' N+192 29' @ ' ""!+' @28' +4+5 +3' 1!+8 3+ ' 8' 2 . !2 " ' "55 !!+3' " ' 9+' 326' 9+' 5"44+.+' @28' "1+ +3' M +1 ' Q$' $>Q$G' 9+' 8 " ' 2 " 5+3' 8' + " ' " ' B2 2 C .' 8 2 32!38' +R 24' "' 9"8+' " ' 24+' "! 6E' 8+D+ ' 8 3+ 8' @+!+' B2 ! 5 42 +3 ' $P' " ' @9"B' + +!+3' !"B' 44 2B8' "44+.+' ' $>QQ' 9+!+' @+!+' 7+8 3+8' 9+' 1!+8 3+ ' Q' 1!" +88"!8' 2 3' 2' "!' 9+' 1!+8 3+ ' @28' 9+' " 46' +259+!' " ' 9+' 8+ "!' 54288' +2!46' 244' 9+' 8 3+ 8' @+!+' 1""!' 2 3' 9+' 5"8 ' " ' 2' 6+2!8' 859""4 .' @28' 27" ' dQ##' 9+' +2!46' 6+2!8' @+!+' 1+! "38' " ' 8 ! . .4+' 8"' A++ ' 92 ' @9+ ' !+8 3+ ' ""!+' 3 +3' !"B' "D+!@"!A' ' $>Q;' 9+' 3+812 ! .' 8+ "!8' 28A+3' 1+!B 88 " ' "' .!23 2 +' !"B' 8"B+' " 9+!' 8 " ' " ' 4 9+' 8+5" 3' 6+2!' " ' 9+' 23B 8 !2 " ' " ' !+8 3+ ' +B2 ' B19!+6' M 2 . !2 +3' 5 ' $P' $>Q;G 3 3' 9+' 5"44+.+' 8+5 !+' 2' 592! +!' 9 8' @28' .!2 +3' 76' 9+' +!24' " ! ' " ' +7 ' Q$' $>QP' ' 9+' 25+' " ' 2 ' "11"8 " ' 4+3' 76' 9"8+' @9"' +4 ' 92 ' 44 2B8' "44+.+' 89" 43' 7+' 9+' " 46' 5"44+.+' ' @+8 +! ' 2882C 59 8+ 8' !"B' $>QP' "' $>;& B9+!8 ' .!+@' !21 346F "!' @"' 6+2!8' 9+' 8 " ' 923' B"!+' 8 3+ 8' 92 ' 2!D2!3' "!' 2 6' " 9+!' B+! 52 '5"44+.+'+J5+1 ' 24+' ' 9 8' .!"@ 9' @28' 255"B 12 +3' 76' 5!+28 .'1"D+! 6' +!' 8+D+!24' 6+2!8' " ' 8 81+ 8+' 2' 1+ " ' "!' 8 2 +' 2 3' @28' 3+ +3' 76' 9+' + +!24' " ! ' ' $>;Q' B B+3 2 +46' .!23 2 +8' 2 3' ! + 38' " ' B9+!8 ' 76' 9+!" 5' + "! 8' !2 8+3' d;# ### ' 244' " ' ' 8 7C 85! 7+3' 7+ "!+' 9+' + 3' " ' 9+' 6+2!' ' $>;Q' 9+' + !"44B+ '@28' QP<' 7 ' 76' $>=& ' 923' 3+5!+28+3' "' 4+88' 92 ' 924 ' 92 ' B7+!' 9+' 12! 24' 3+54 +' " ' !+4 . " 8' + 9 8 28B' - !+3' 9+' 5"44+.+' 28' 3 3' 4 A+@ 8+' 9+' 2 E842D+!6' 2. 2 " ' 9+!+' @28' 248"' 2' .!"@ .' 81 ! ' " ' 3 882 8 25 " ' 2B" .' 9+' 3+!.!23 2 +8' ' @9 59' 7+.2 ' ' $>;Q' @9+ ' 9+' 8 3+ 8' 28A+3' 92 ' 9+' 868 +B' " ' 9" "!2!6' 211" B+ 8' 7+ 592 .+3' "8 +!+3' 76' 9+' +@8121+!8 ' 9+' B1!+88 " ' 7+52B+' 5 !!+ ' 92 ' 9+' 5"44+.+' @28' B 8B2 2.+3' 2 5 24' B1" + 5+' 5" ! 7 +3' "' 3 5 4 +8' @9 59' @+!+' " ' !+B"D+3' 4' 9+' !+8 . 2 " ' " ' !+8 3+ ' B19!+6' ' $>=Q' 8' 8 55+88"!' @28' 9+' +D ' 3@2!3' 595"5A' 1!" +88"!' " ' 9+"4".6' 2 3' .+"4".6' 2 3' " +' " ' 9+' .!+2 +8 ' " ' B+! 52 ' .+"4". 8 8' 9+' 25 ' 2 3' 82.25 6' " ' !+8 3+ ' 595"5A' 7!" .9 ' B9+!8 ' "44+.+' !"B' 9!+2 + +3' 72 A! 1 56' "' 2' 82 +' 2 3' 1+!B2 + ' 1!"81+! 6' ' 9+' 7+. .' " ' 9 8' 23B 8 !2 " ' 9+' 142 ' @28' 8+! " 846' 5" 8 3+!+3' " ' 5" .' 9+' 5"44+.+' ' 8' "! . 24' "!B' " ' 1!+12!2 "!6' 859""4 ' 2 3' 5+! 2 ' 4 + 24' 3+!.!23 2 +8' !+B2 +3' ' 5"44+.+' " 46' 76' 9+' 1+!8" 24' 1+!8 28 " ' " ' 9+' 1!+8 3+ ' ' 8' 54"8+' M$>=0C' 9+' 8 2 +' 923' !+5+ D+3' dQP ### " ' 2 3' !"B' 9+' 8 2 +' 1!" +88"!89 18' 923' 7++ ' + 3"@+3' @ 9' d&Q ### ' 9+' +2!8' 3' " ' d$Q ### @28' +8 274 89+3 ' 2 3' 2' 85 + 5' 5" !8+' 923' 7++ ' "!.2 I+3 ' @+ 6' 6+2!8' 7+ "!+' B9+!8 ' 923' 7++ ' 2' 1 " ++!' ' !"3 5 .' 2' S' 12!244+4' 5" !8+' T' ' @9 59' 9+' 2 5 + ' 42 . 2.+8' " ' 9+' "43' 5 !! 5 4 B' @+!+' !+1425+3' 76' 9+' B"3+!' ' +B1928 8' @28' 42 3' 1" ' 9+/85 + 5+8' B"3+! ' 9 8 "!6' 5 D 4' 2 3' 1"4 524' 42@' 2 3' 2' " +59 524' 8 36' @28' B23+' " ' + . ++! .' 1!"74+B8' A+' 9 8' +2!4 +!' +J1+! B+ ' 9+' 85 + 5' 5" !8+' " ' !+8 3+ ' 595"5A' 428 +3' " 46' 2' +@' 6+2!8' 9+' " ! 9' 1!+8 3+ ' @28' 9+' +D ' 44 2B' . 8 8' +2! 8' 2!D2!3' LQ0' 8 244+3' "D ' QQ' $>P=' @9"' ' 9+' @"!38' " ' !"C +88"!' ' ' 64+!' C' " 3' 9+' 5"44+.+' 7! 5A' 2 3' 4+ ' ' .!2 +T' +D+ ' 7 43 .8' @+!+' +!+5 +3' "!' 12! 46' !+7 4' 3 ! .' 9 8' 23B 8 !2C " ' F' 9+' 5 !! 5 4 B' @28' 7!"23+ +3' 2 3' B2 6' 859"42!89 18' @+!+' +8 274 89+3 ' ! .' 9+' D 4' 2! ' B9+!8 ' + 4 8 +3' Q=0' 8 3+ 8' ' 9+' " ' 2!B6 ' " ' @9"B' 0>' @+!+' 3+!.!23 2 +8' 9+' + 9' 2 D+!82!6' @28' 5+4+7!2 +3' 2 ' 9+' "B B+ 5+B+ ' " ' >0 @9+ ' +2!46' 0## 24 B ' @+!+' 1!+8+ ' 1" ' 9+' 8 33+ ' 3+2 9' " ' !+8 3+ ' +2! 8' M: +' >' $>0&G' 9+' ! 8 ++8' +4+5 +3' 28' 9 8' 8 55+88"!' 9+' +D ' : 4 8' ++46+' 1!" +88"!' " ' 19 4"8"196 ' 2 3' 2 ' 9+' B+' 2' B+B7+!' " ' " .!+88 ' 9+' "!5+' " ' !+8 3+ ' ++46+L8' 592!25 +!' 2 3' 9+' +J + ' " ' 9 8' !+1 2 " ' 28' 2' 859"42!' 2 3' +3 52 "!' 3 3' B 59' "' 1425+' B9+!8 ' 2B" .' 9+' 7+8 ' B+! 52 ' 5"44+.+' +8 ' +' !"3 5+3' 9+' 868 +B' " ' 8+4 E."D+! B+ ' 2 5 12 +3' B2 6' 6+2!8' 7+ "!+' @9 59' 3+D+4"1+3' "' " +' " ' 9+' 7+8 ' +2 !+8' " ' B9+!8 ' 4 +' 9+' 8 J 9' 1!+8 3+ ' @28' +!! 44' 3@2!38' 2 +8' @9"' 9+43' " 5+' !"B' $><#' "' $><<' +' @28' 8 55++3+3' 76' 9+' +D ' +"!.+' 2!! 8' L>;

9+' 5"44+.+' 8' 5" !"44+3' 76' 2' "2!3' " ' ! 8C ++8' " ' $0' B+B7+!8 ' " ' @9"B' $# 2!+' 426B+ ' 2 3' 0' 2!+' 54+!.6B+ ' @+4D+' ! 8 ++8' 2!+' +4+5 +3' "!' 4 +' 76' 9+' 7"2!3 ' 2 3' P' 2!+' 59"8+ ' 76' 9+' 24 B ' "' 8+!D+' P' 6+2!8 ' B9+!8 ' "44+.+' @28' " +' " ' 9+' 8 " ' 8' "! . 2446' 255+1 +3' 76' 9+' 2! +.+' " 32 " ' "!' 9+' 3D2 5+B+ ' " ' +259 .' #:" "&"



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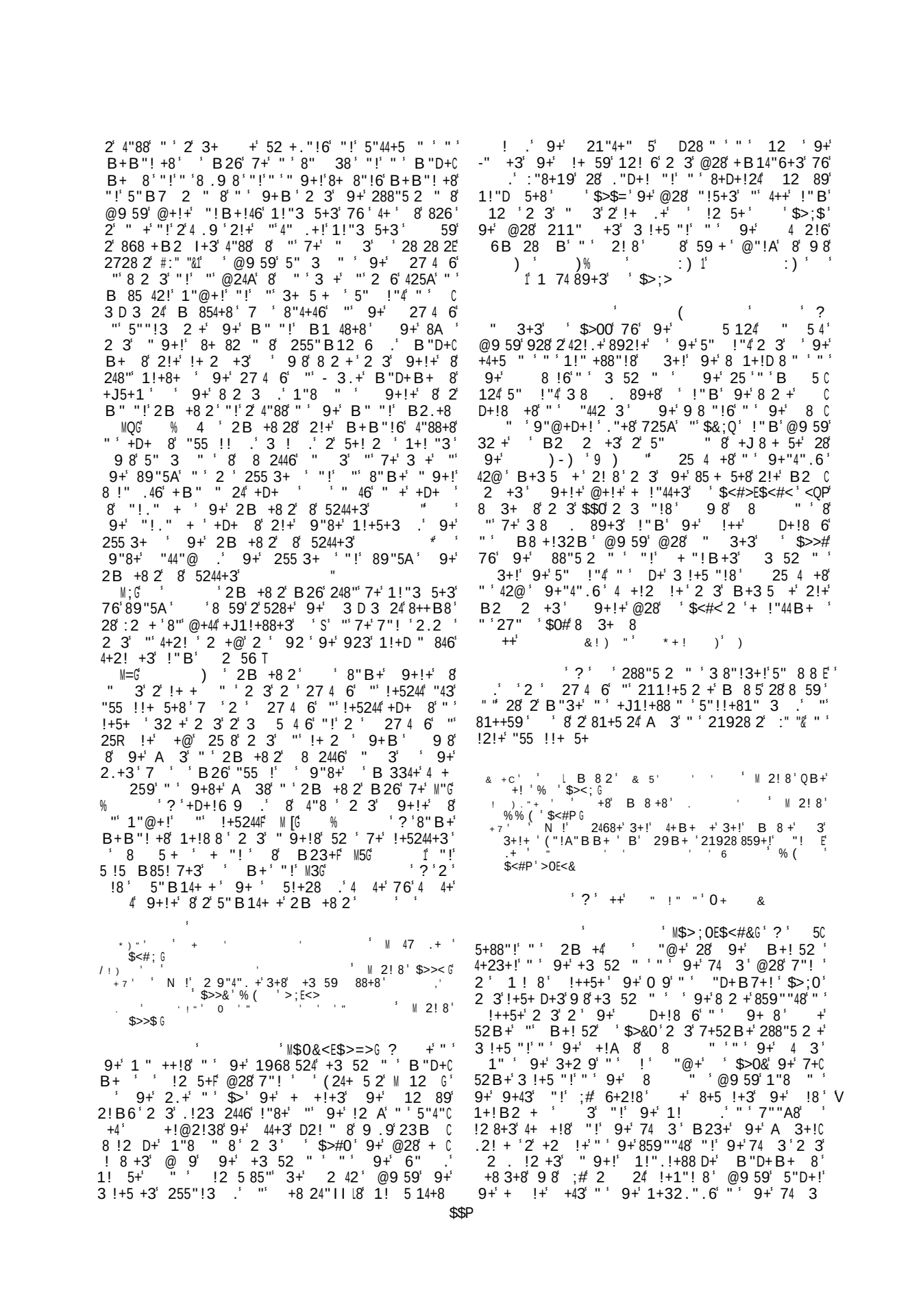

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"' - J 21"8 " ' @ 9' 9+' +@' @"!3 ' 8"' 28' "' 288 8 ' 9 B' ' .+ .' 9+' 8" 3' 76' 2 24".6 ' MQG' ' B+ 9"3' 8+3' ' +259 .' 9+' 59 43' "' 5"B 1!+C 9+ 3' 9+' 1!" 5 2 " ' . D+ ' ' 9+' 3 5 " 2!6' @9+ ' 9+' 928' "' A "@4+3 .+' " ' 9+' 8" 38' @9 59' . "' @ 9' 9+' 81+5 24' 3 25! 524' B2!A8' 8+3 ' 11"8+' 9+' 59 43' 8++A8' 9+' 1!" 5 2 " ' " ' 9+' @"!3' S' 2 " T' 9+' @"!3' S' 2 " ' T' 8' B2!A+3' S 2E " /FT' 7 ' 9+' 59 43' 3"+8' " ' A "@' 9+'8" 3' 92 ' 255"B 12 +8' 3 ' +'.42 5+8' 2 ' 9+'4 8 ' " '8 B 14+' A "@ ' @"!38' 2 ' 9+'7" "B' " ' 9+'3 5 " 2!6' 12.+' 4' 9+' 38' 2' @"!3' 5" C 2 .' ' 8 B 42!46' B2!A+3 ' +' 38' 9+' @"!3' S' 28A T' 2 3' !2 8 +!8' 9+' 8" 3' " ' 3' ' S' 28A' T' "' 9+' @"!3' S' 2 " T' 9+' B+ 9"3' " ' 2 24".6' 8' 4 A+@ 8+' 2114 5274+' "' 81+44 .' 2 3' " 9+!' 8 7-+5 8 ' ' ++' % !) ' ! +) ')) "

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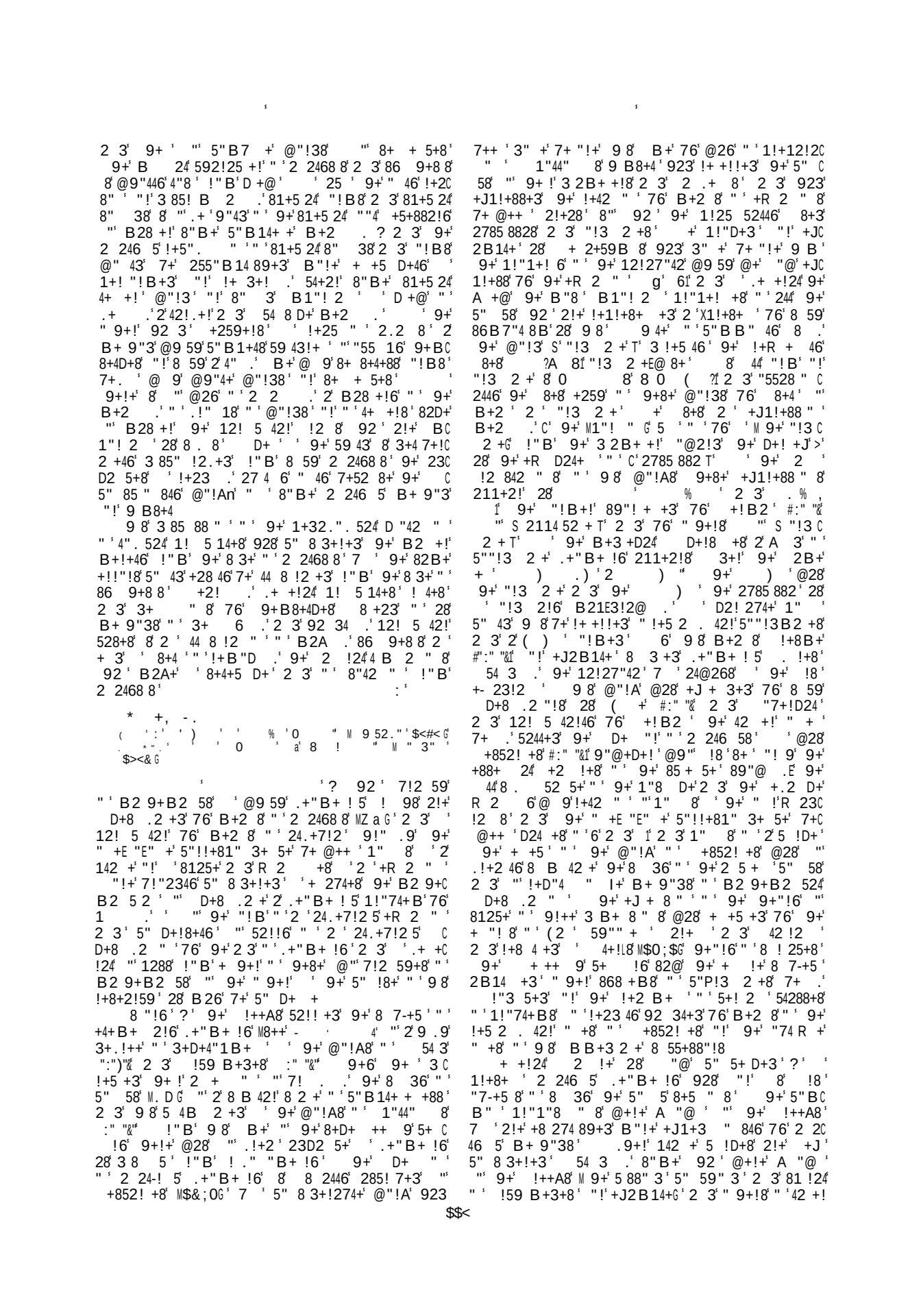

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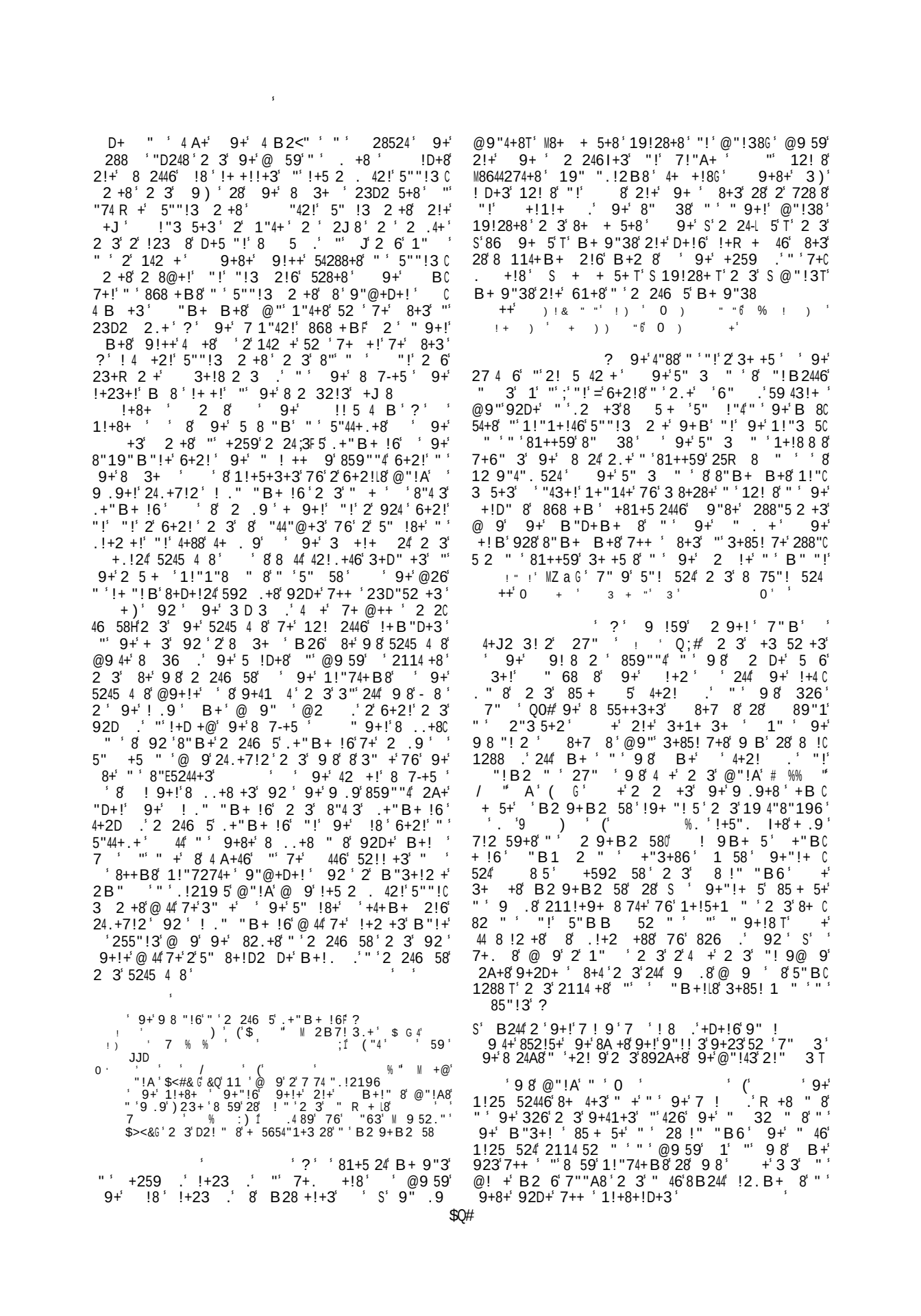

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agents resembles that of ether and chloroform, but in place of a complete amnesia there may be a remembrance — but usually of a delirious nature.

(2) Local surgical anesthesia may be produced by a variety of agents, of which cold, and cocaine and its chemical derivatives, are the most important. The application of a mixture of ice and salt or the spray of ether, of ethyl chloride, of methyl chloride, and of many other liquids of low boiling point produces a greater or less freezing of the parts to which they are applied, and there is loss of certain sensations in that part. After freezing the skin, for example, the sensations of pain, of pressure, of touch, and of temperature are abolished for a time, the duration of the anesthesia depending upon the amount of the freezing and the temperature of the surrounding air. The sensory nerve endings are not all equally affected by applications of short duration, nor does the effect persist for the same length of time for all the different sensations. Pain and temperature sensations appear to be most affected. Thermal stimuli, especially cold, cannot be felt as such, even after a very brief application of the freezing spray, although light touches and pressures can be well felt. Pain sensation is abolished for several minutes, and remains subacute for a comparatively long period. Touch and pressure sensations are the last to disappear and the first to reappear.

Anesthesia from cocaine and its derivatives is produced by the subcutaneous injection of solutions of these substances or by the application of them to mucous surfaces. In some parts of the body cocaine produces a true analgesia without an anesthesia, but usually affects all kinds of sensation in the part to which applied.

(3) The anesthesias of an endogenous (within the body) nature are of more pedagogic interest and importance. Changes in sensation may be produced by alterations in the structure or in the conducting power of any part of the afferent system. It is assumed that impulses which are started by stimuli do not become conscious parts of us, *i.e.* do not become sensations, until they reach the cerebral cortex (see article on NERVOUS SYSTEM especially cerebrum). A sensory system consists of the receiving element in the skin or other organ, the peripheral nerve that conducts the impulses to the spinal cord and through it to certain subsidiary centers in the mid-brain (*e.g.* the thalamus), and the nerve tract leading to and the cells in the cerebral cortex. Theoretically it is possible to have a change in sensation in any small or large part of the body due to functional or structural alterations in some part of this afferent system. In practice, however, it is found that the sensation losses have rather definite characteristics and distributions.

When a peripheral afferent nerve is cut, sensation is lost over a considerable skin area. Stimuli of light touch, of pressure, of temperature, and of pain are not appreciated, and the area is anesthesic, analgesic, and thermoanesthesic. Surrounding this area of complete loss there is usually a narrow band from which the sensations of pain, of pressure, and of hotness and coldness may be obtained, but not the sensations of light touch and of warmth and coolness. Such an area is well defined but not sharply marked off from all other skin areas.

The section of a posterior root of the spinal cord is accompanied by similar but not corresponding losses, but the definition of areas is not so sharp as in the case of the peripheral nerves. There is, in addition, a marked difference in the areal distribution of the peripheral and the spinal nerves, and this fact enables the physician to diagnose the seat of a lesion causing an anesthesia. An illustration of the varying distribution of the peripheral and spinal nerves in the leg is given in Figure 1. In this figure A represents the approximate distribution of the posterior root fibers and B that of the main peripheral nerves.

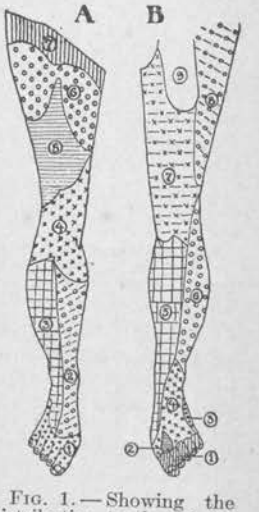

FIG. 1. — Showing the distribution to the skin of the anterior part of the leg of the sensory fibers, A from the posterior roots, B from the peripheral nerves.

A 1, first sacral; 2, 3, 4, 5, 6, respectively fifth, fourth, third, second, and first lumbar; 7, twelfth choratic.

B 1, median plantar; 2, deep peroneal; 3, sural; 4, superficial peroneal; 5, saphenous; 6, common peroneal; 7, anterior femoral and obturator; 8, lateral femoral; 9, genitofemoral.

Adapted from Morris.

Organic disturbances of the spinal cord and the brain produce a widespread sensory change, but the combination of sensory losses are usually different to those found in lesions of the peripheral nerves and of the posterior roots. At times functional derangements of the central nervous system may be accompanied by anesthesia of slight extent. Figure 2 illustrates some of the kinds of anesthesias from spinal cord and brain lesions.

The most common diseases in which these forms of anesthesia occur are: injuries to or inflammation of the brain and its membranes, disease of the spinal cord, posterior columns and horns, hysteria and the traumatic neuroses. From injury or disease of the brain mono- and hemi-anesthesias are common. In these cases the borders of the anesthetic areas are not sharply defined, and in the case of the mono-anesthesias the distal portion of the limb is always more affected than the part near the

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trunk. In children cerebral injury may result in a diplegia (a palsy), and be accompanied by a bilateral anesthesia. It is more common, however, to find this distribution from disease or injury to the spinal cord. Disseminated anesthesias are most common in hysteria, and in this disease all other forms of anesthesia may be encountered. The hysterical anesthesia is usually complete and sharply defined, and in these respects is quite unlike the anesthesia from any organic lesion, with the exception of that from peripheral nerve section. The distribution of the anesthetic area in hysteria is usually that of an artificial bodily segment, such as a finger or a hand, and it is not difficult to differentiate the hysterical from organic anesthesia on account of this artificial and unphysiological distribution.

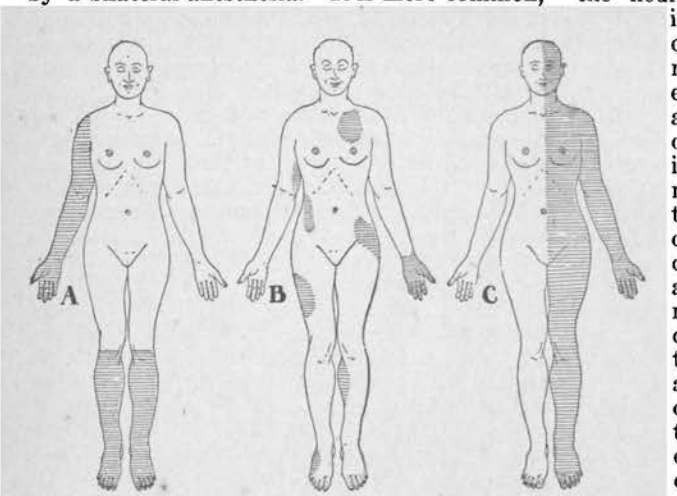

FIG. 2.—Showing various forms of anesthesia from lesion of the spinal cord and brain. A, mono-anesthesia of the arm, and bilateral anesthesia of the leg; B, disseminated anesthesias; C, left hemi-anesthesia.

The sensory losses from lesions of the spinal cord differ according to the level of cord at which the lesion is located and according to the columns or tracts that are diseased. Illustrations of the extent of the sensory changes according to the vertical location of the cord disturbance will be found in many good textbooks dealing with diseases of the nervous system. The sensory functions of special tracts are dealt with in the article on the spinal cord, to which the reader is referred.

Lesions of the post-central portion of the cerebral cortex produce anesthesia or hypesthesia, depending upon the extent and the severity of the lesion. In the cerebral anesthesias it is uncommon to find a complete anesthesia, certain sensations always remaining. Lesions of the mid-brain, however, may be followed by a hemi-anesthesia for all forms of skin sensation, especially if the internal capsule or the thalamus be involved.

The differentiation of the sensory disturbance and the diagnosis of the lesion causing the particular type of anesthesia are matters for the neurologist, but the teacher should be informed of such conditions in the children under her control that she may adjust her teaching to the child's endowment. All education has for its aim the adjustment or the association of sensory and motor impulses, and it is a truism that when either the motor or sensory endowment is less than normal, or when there is a marked defect in either of these spheres, the child cannot have normal responses to appropriate stimuli. This is well recognized in cases of paralysis, because we can see the defect or the result of the defect, but most people, physicians as well as the laity, take little account of the conditions which do not intrude themselves upon their vision. The effect of certain sensory losses and the educational application of these facts are given in the article on ataxia (*q.v.*), and the application of similar facts to educational procedure may be made in the same way. At present we know too little of the psychology of the mentally and morally defective, but from observations already published it appears that moral as well as physical defects are associated with sensory disorders, and it follows that in the education of both classes the method of dealing with normal children, *i.e.* on the assumption of perfect sensory and motor endowment, is ineffectual, and a waste of time for both pupil and teacher. It is understood, and understanding is followed by practice, that the blind may be reached through touch and hearing sensations, but it is apparently not understood that certain people are anesthesic or hypesthesic and that they must be reached through other senses.

S. I. F.

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211+2! 92 .4"E "!B2 @28 !+. 42!46
8+3 9+ 12!"59 24 859""48 2 3 ! M 8 +!
1!"72746 " 46 B+2 8 9 8 868 +B2 5 C
D+8 .2 /2B " .+J 2 88 @ 44 54+2! 1
9+8+D2! " 8 R +8 " 8 J "!3 D+!8 6
8 2 +@9 59 8 +6 9+) 5
% % 6 M11 9+J 2 3 =;>G !+ +!8 "
9+ 9 ! ++ 9 5+ !6 M7 @9 59 8++B8 "
7+4" ." "/ 9+ +2!46 " ! ++ 9 5+ !6G 1!"C
D 3+8 92 7"68 8924 7+ 2 .9 "5" 8 ! +
! 59 28 @+44 28 .4 89 /"!3+!
92 9+ !+ 59 " . +B26 " 7+ "!C
." + 6 9+ + 3 " 9+ 9 ! ++ 9 5+ !6
.4"E "!B2 @28 !21 346 36 .28 2 " . +
2 3 (8 .2 3 ! M 8 +! 2!+ 5"!!+5
9+ D +@ 92 @28 1!"72746 +D+!
!+2446 1"1 42! +J5+1 1"88 746 12! 5 42!
3 8 ! 5 8 " @92 +J + 928 4+ 8 B2!A

E %

" 4"524 3 24+5 8 .42 3 !+B2 8 "7+ 8++

E % ?.4"E 2J" "!43 .4 89 8 9+"!B""9+.4 89 42 . 2.+ 5 !!+ 81"A+ 8+2 3 "25+! 2 +J + 248" @! + 8+2 .42 3 !"B 9+5"B .""9+ .4 89 9+ 9 5+ !6 "27" 9+ 6+2!$Q## 8 2 4 +!2!6 42 . 2.+ 9+D+! 25C 42!81++59@ 9 9 8 1+! "3 25R !+3 5" 8 3+!C 274+3 . 6 +81+5 2446 9+!+5"!3 ."" 9+ 2 D+1"+ 524 !23 " 8 9+1!"8+@9 59 @28 9!" .9" "B"!+2523+B 5 2 3 +554+8 28 524 592!25 +! 92 9+D+!8+ 9+D+! 25 42! 923 "B++ 28 !" .+!5"B1+ " @ 9 9+ D+!824 2 "9+ 334+ .+8 5+ B"8""9+ 43 .4 89@! .8 "@+J 2 2!+1!+8+!D+3 9+ 2!46 +8 2J" 3 24+5 @9 59 7+52B+ 8 2 32!3 9+!+ ."" ." 4 !+3 M3 <#$G 8 8 2446 9 8 "!B""9+42 . 2.+ @9 59 8 B23+ 9+ 728 8""8 36 9+ B"3+! 54288C !""B

9+!+ 2!+ "46 84 .9 +D 3+ 5+8 92 9+D+!C 25 42! @28 +D+! 9+ 8 7-+5 ""2523+B 5 8 ! 5 "3 ! ." 9+ .4"E 2J" 1+! "3 9+ B"8 B1"! 2 ""9+8+ +D 3+ 5+8 8 "7+ "3 9+ 8 2 +B+ 8 "4 !+3 9+!+ C 25+ "9 8 !2 842 "&3 >) $ "1+ !+."!6 M ++ 9+) $ *+! 4 4 !+3 2 92 1425+ "4 +8 2 868 +B""+!24 +3 52 " 255"!3 ."@9 59 244 .4 89 7"68 2!+"7+ 8 ! 5 +3 .4 89 4 9+6 2!+ 274+ "!+23 M2 3 1!+8 B2746 248"" @! +9" .9 9 8 8 "81+5 52446 8 2 +3G .4 89 @! . +! 9 8 9"8+ 8 3+ 8@9" 2!+ "7+ 1!+12!+3 "!9+9 .9+! 25 D +8 "9 !59 2 3 2 +B26 1!"5++3 255"!3 ."4 !+3 "9+8 36" 2 8 "1!"7274+ 92 4 !+3L8 859+B+ "!9+ !2 ."" ."E 2J" 6" 98 .4 89 @28 +D+! D+!6 +J + 8 D+46 52!! +3 "!" + 9 .9+3 8 !7+3 8 2 +"1 74 5 2 2 !8 3 ! ."9+ 43 .4 89 1+! "3 92!346 1+!B +3 9+ +427"!2 "8 59 2 5"B1!+9+ 8 D+ +3 52 " 24 868 +B +D+! 9+4+88 8 5+! 2 92 8"B+ 8 3+ 8 B 8 92D+ !+5+ D+3 2 ."" 3+24 "!B24 8 ! 5 "9+ !B" 9+! ". +8 5+ @28 " 46 76 8 59 8 ! 5 " 92 9+42 . 2.+5" 43 7+ 9+43 9+3 . +3 2 3 8 2 32!3 1"8 "@9 59 "!2 4+28 "!5+ ! +8 B2 2 +3 8 1!"7274+ 248"" 92 "!B24 8 ! 5 " ."E 2J" @28 52!! +3 " 8"B+" 9+ .4 89 B" 28 +! +8 28 42 + 28 9+ B 334+ " 9+ @+4 9 5+ !6 8 5+ 8"B+ " 9+ 9 8 "! 524 @! .8 ."E 2J" " 92 1+! "3 +J9 7 2 5" 8+!D2 D+ 2 3 !23 " 24 "!B" 9+42 . 2.+3 +!+ B2 6 !+81+5 8 !"B 9+5" +B1"!2!6 81++59 "+J 7""A8 8"2! 28 @+ 2!+ 2@2!+ @+!+ @! + "!9+1 !1"8+" 8 ! 5 ." 4 89 3 ! ." 9+ ."E 2J" 1+! "3 59

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+! 9+ "!B2 " R +8 9+ .4 89 " 9+ 1!+5+3 ." 1+! "3 7+52B+ !21 346 +44C . 74+ +D+ "2 +3 52 +3 .4 89B2 92 C 5+!"!+J2B14+" 5" 43 " 92D+ !+23 9+ - !) (1 9+ 923 592 5+3 1" 2 B2 85! 1 5"16" " 3 2J " @9" @28 8"B+@92 B"!+ +J1+! 42 . 2.+8 +448 8 M1!+ 25+ " 9 8 1 $=<#G 92 43 .4 89 8++B+3 B"!+ 9A+ 59 "9 B 92 .4 89 2 3 92 9+ 5" 43 " 3+!8 2 3 3 9+ 248+ 2!592 8B8 " 1+ 8+!1!"D+ 2 D+!6 23+R 2 + A "@4+3 + " B+!+46 " .4"E 2J" 7 +D+ " " 334+ .4 89 " 9 8 12!

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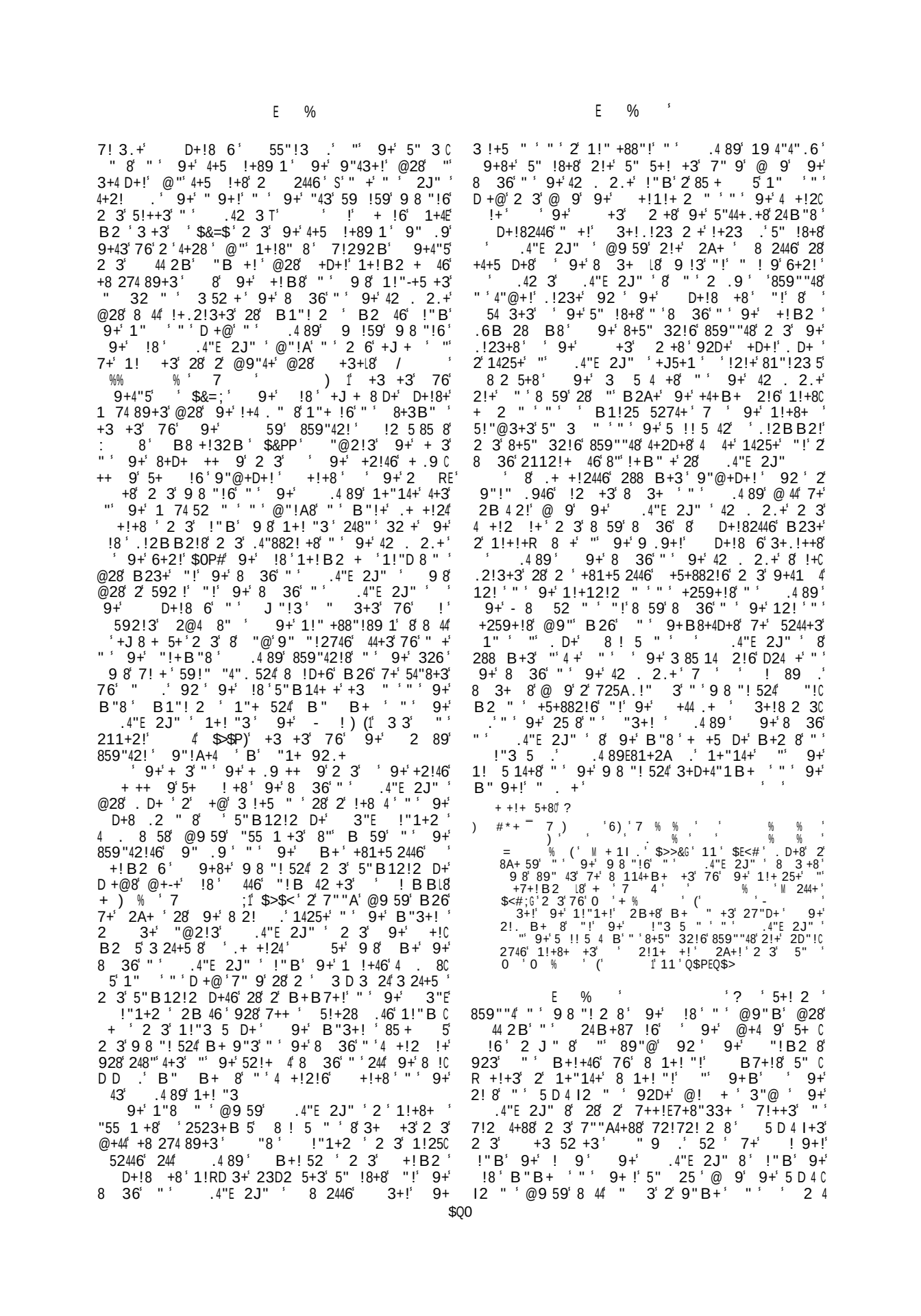

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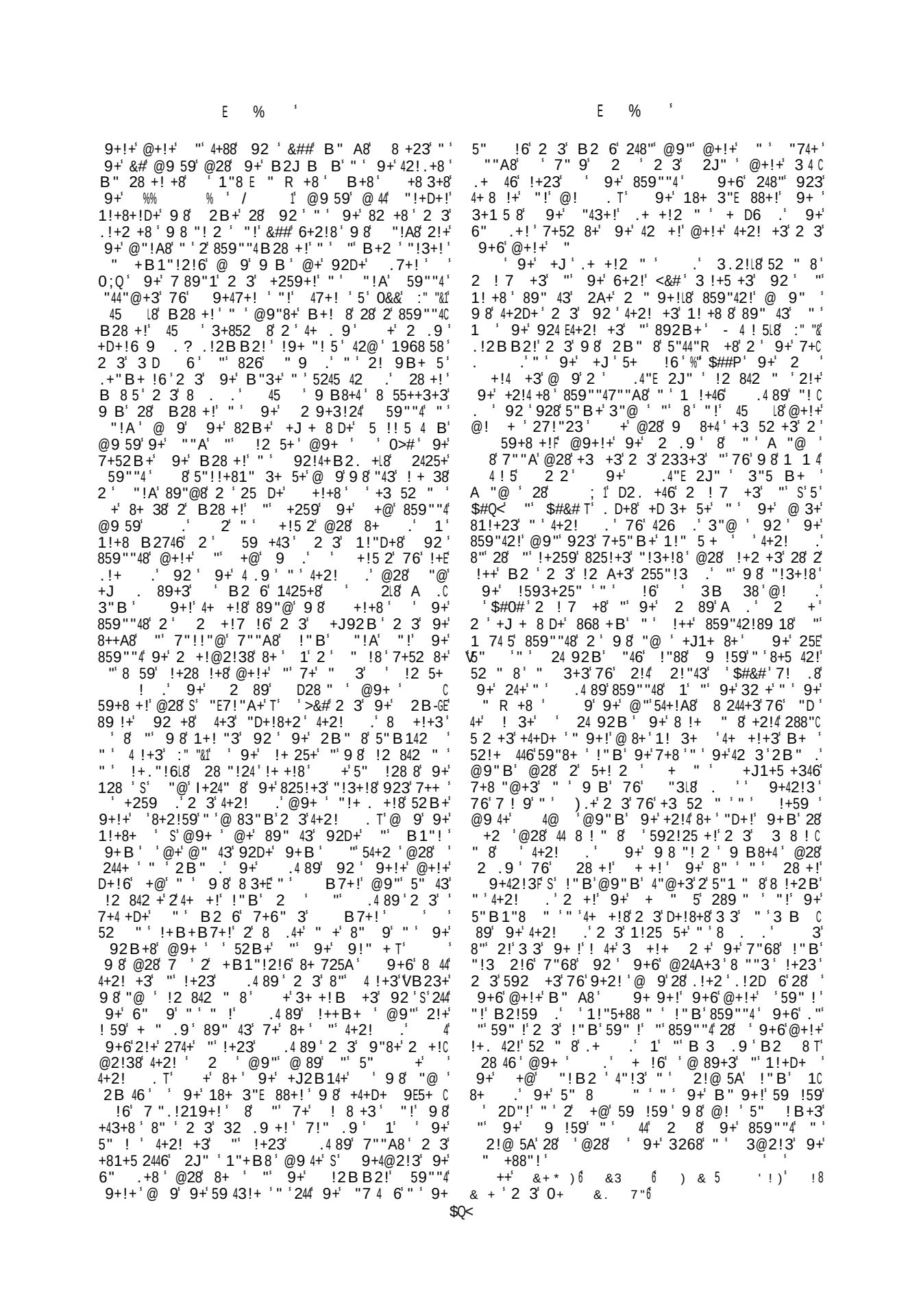

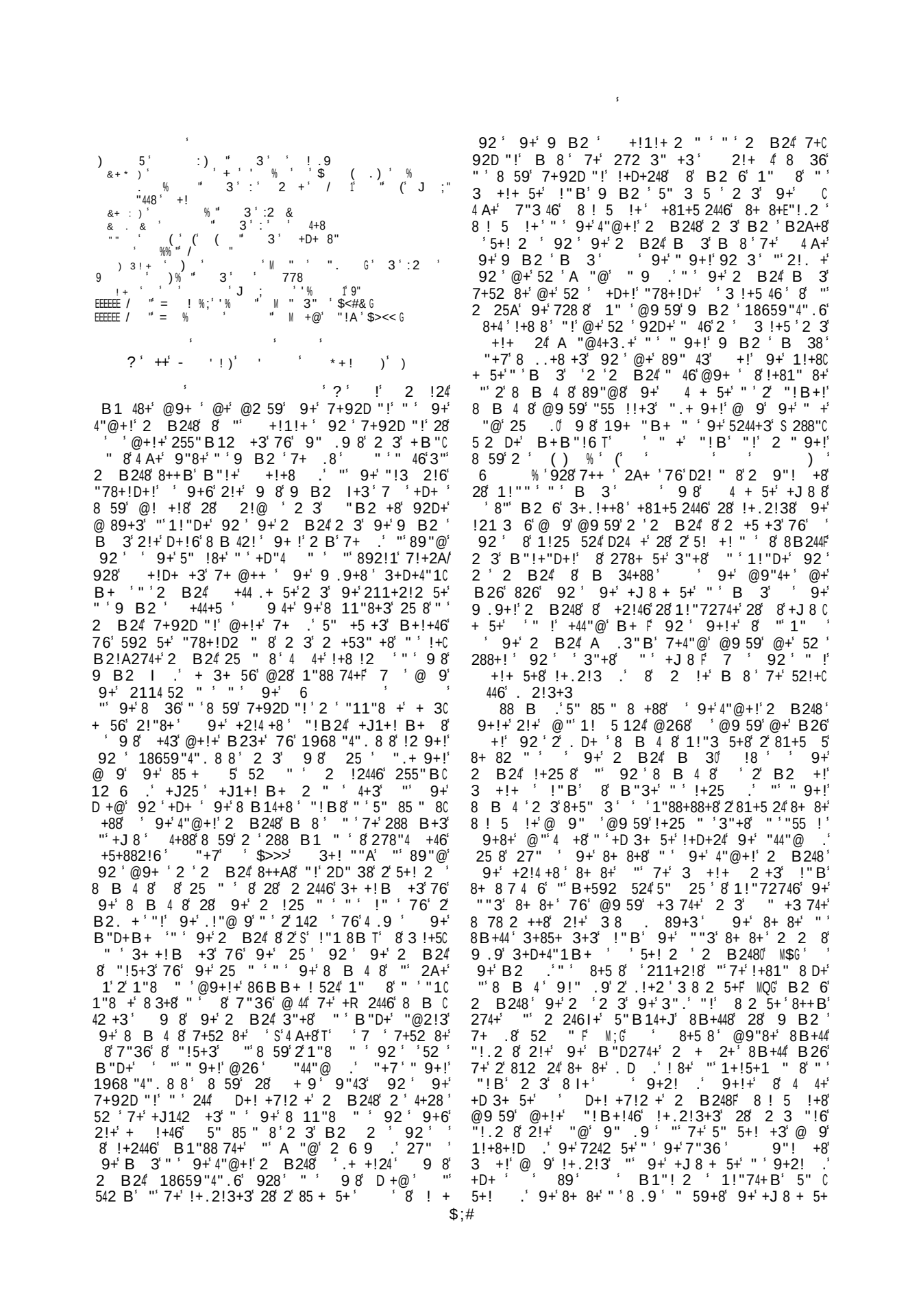

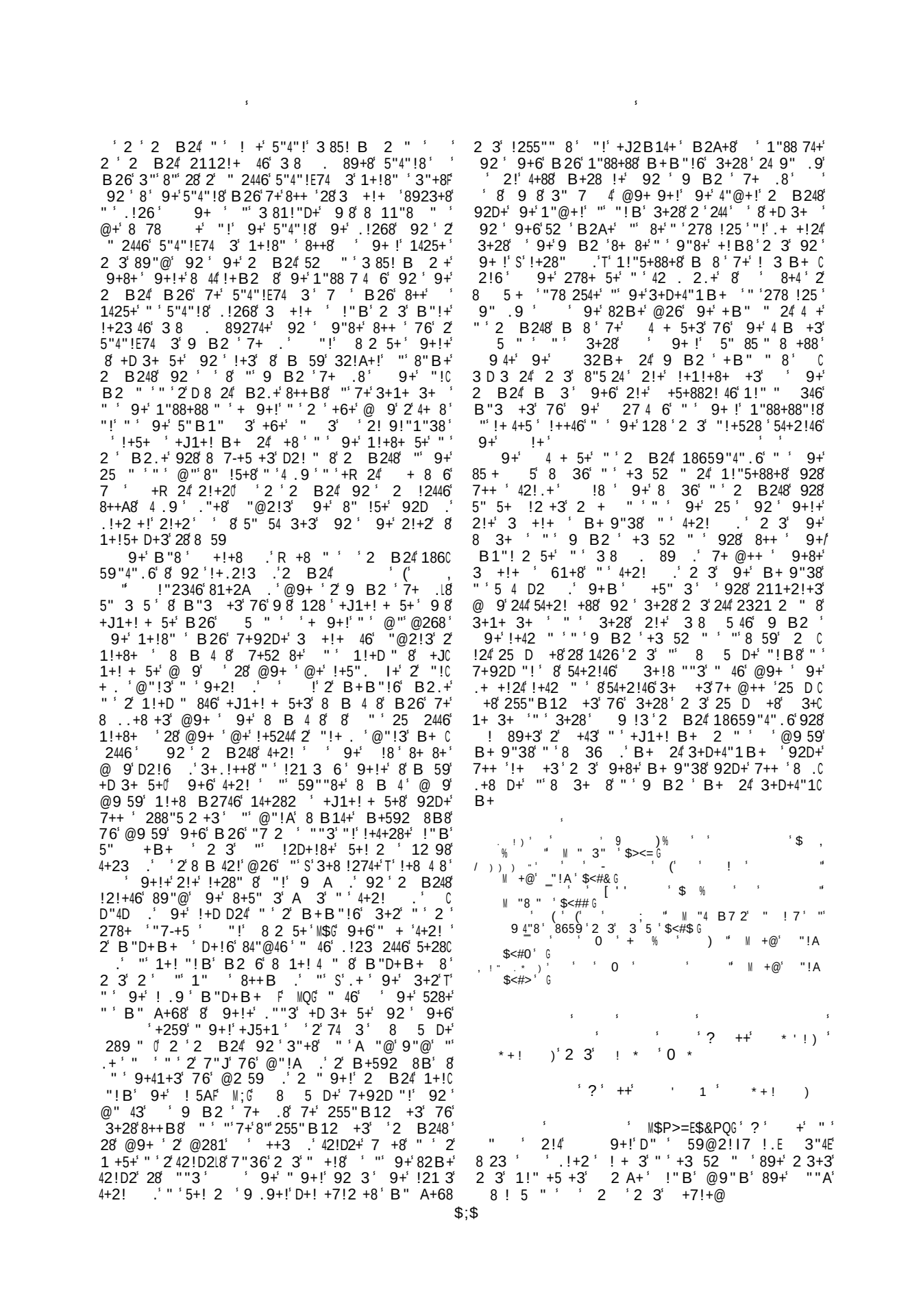

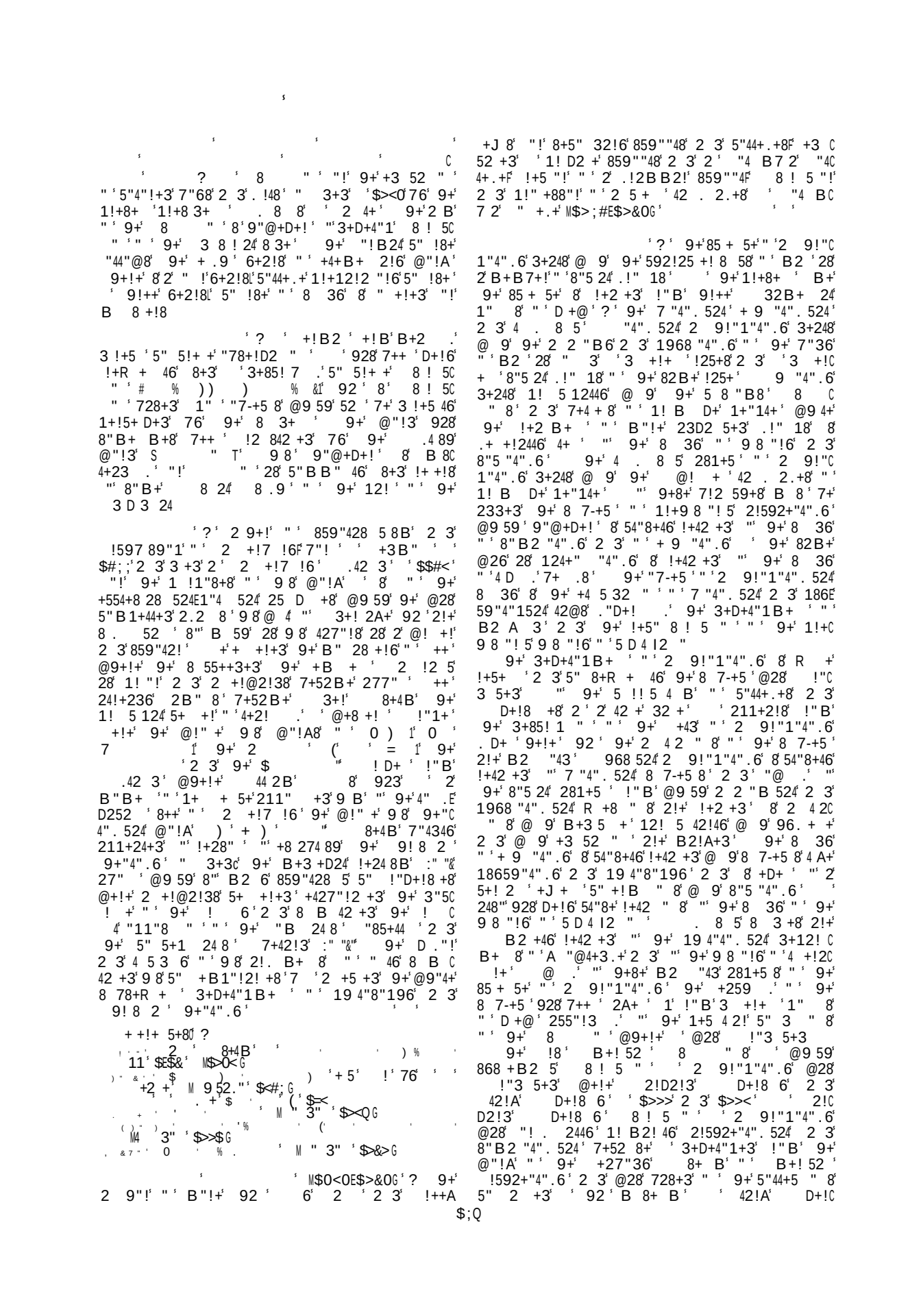

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+!+ 281+5 8 ? 255"!3 . " 9+ +!+8 8 " 9+ !+1!+8+ 2 D+8 " 9+ 3+12! B+ ? 2!+
. D+ 3+5 3+3 1!+ +!+ 5+ 9 8 2!D2!3
D+!8 6 B+! 52 2!592"4".6 8 . D+
3+5 3+3 1!+ +!+ 5+ "D+! " 9+! 8 7-+5 8F @9 4+
"4 B7 2 D+!8 6 B+! 52 + 9 "4".6
2 3 E4 . 8 58 2!+ !+2 +3 B"!+ !+R + 46
92 " 9+! 8 7-+5 8 9+ 54"8+ 2 4 2 " " "
9+ 2!D2!3 3+12! B+ @ 9 9+ +27"36
8+ B 248"" 7! .8 27" 92 B2 +! 24
5 4 !+ 8 !+2 +3 @ 9 .!+2 + 8 6 @9 4+
9+ 8+12!2 " " 9+ B+! 52 8+ B " "
2 !24 8 "!6" " +@ "!A !"B "4 B7 2
D+!8 6 7! .8 27" 92 18659"4". 524
R +8 " 8 2!+ . D+ .!+2 +!1!"B + 5+ E 4"8+
2 4 2 " 8 7+ @++ B 8+ B8 2 3 D+!8 +8
"! 5"44+.+8 +J 8 2!D2!3 D+!8 6 24+
D+!8 6 D+!8 6 " + 864D2 2 2 3
9+ D+!8 6 " 24 "! 2 " 2 4+88+!+J +
9+ D+!8 6 " 9 52." " "4 B7 2
D+!8 6 2 3 9+ D+!8 6 " 9 52." 2 3
9+!+ 8 "" "!B24 !+42 " 7+ @++ 9+ 42!.+
B 8+ B8 " 9+8+ 5 +8 2 3 9+ D+!8 +8
1 "" 9+ 1!+8+ B+ .!23 2 @"!A 2 C
9!"1"4".6 8 52!! +3 " 12! 5 42!46 2 "4 BC
7 2 D+!8 6 2 3 2!D2!3 D+!8 6 " 2
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+J + 3+3 .!23 2 @"!A 8 3" + 2 B7+!
" " 9+! 8 " 8
@" 43 8++B 92 9+ 4 B2 + "!.2 I2C
" " .!23 2 @"!A 2 9!"1"4".6 @ 44
+5+88 2 2 8"B+@92 3 +!+ 2!!2 .+B+
" 9+8+ 8 3 +8 92 @92 8 " 3 2 9+
1!+8+ B+ 2 6 B+! 52 8 " "
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2 9!"1"4". 8 89" 43 81+5 24 I+ " " + " 9+
9!++ B1"! 2 4 +8 B+ " +3 7+ "!+ @9 4+
9+ @"" " 9+! 8 7-+5 8 89" 43 7+ 8 78 3 2!6
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!+R !+8 2 9"!" .9 19 4"4". 524 !2 .8 59
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B+ 8 3+24 .@ 9 3"E !"1+2 42 . 2.+8
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+D+!7+ 1"88 74+F 7 9+ 1+5 4 2!592!C
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2 3 B+ 9"38 " 9+ 8 ! 5 "!8
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@ 44 . D+ 9+ 8 3+ 2 .!281 " 5+! 2 A 38 " "
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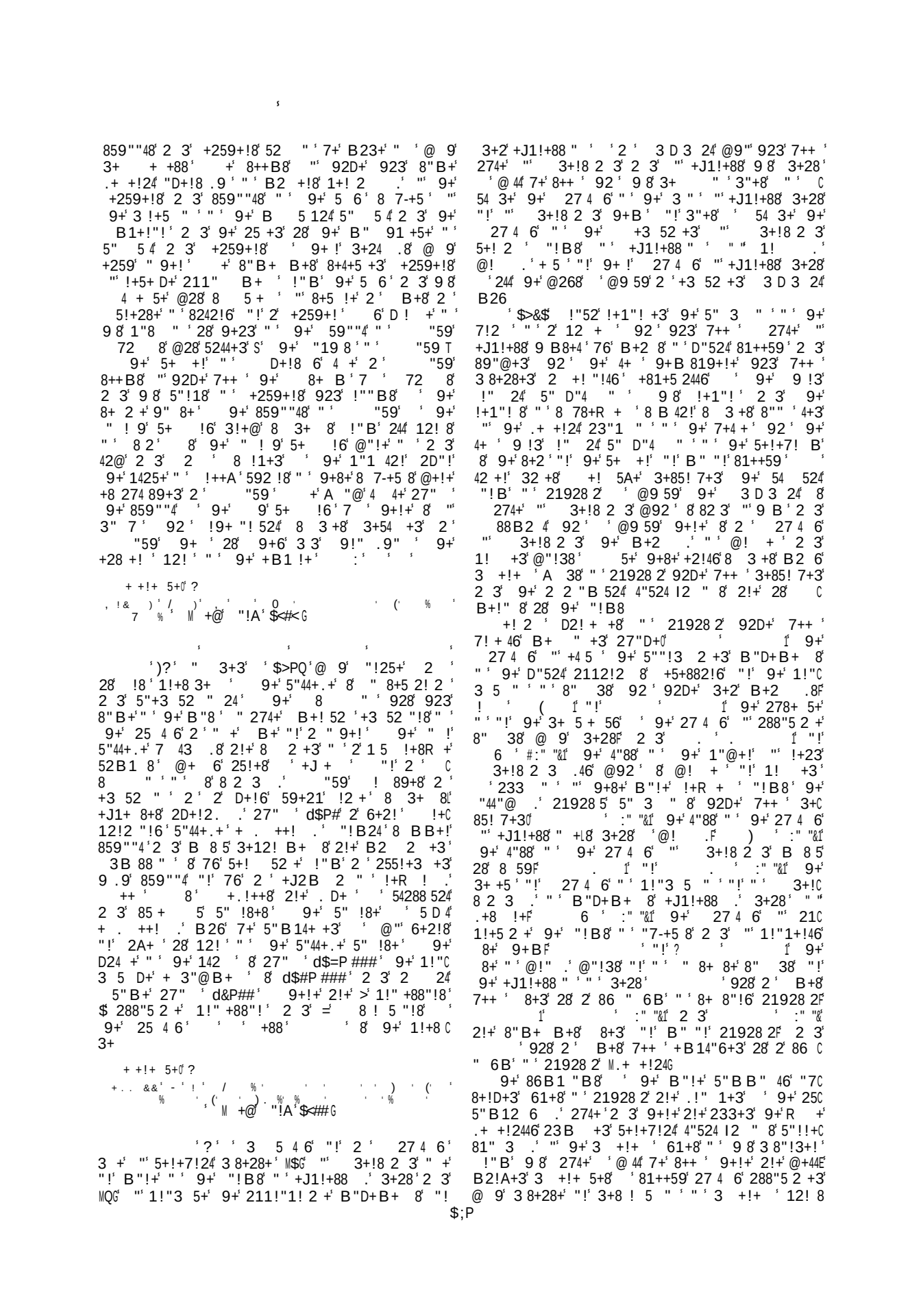
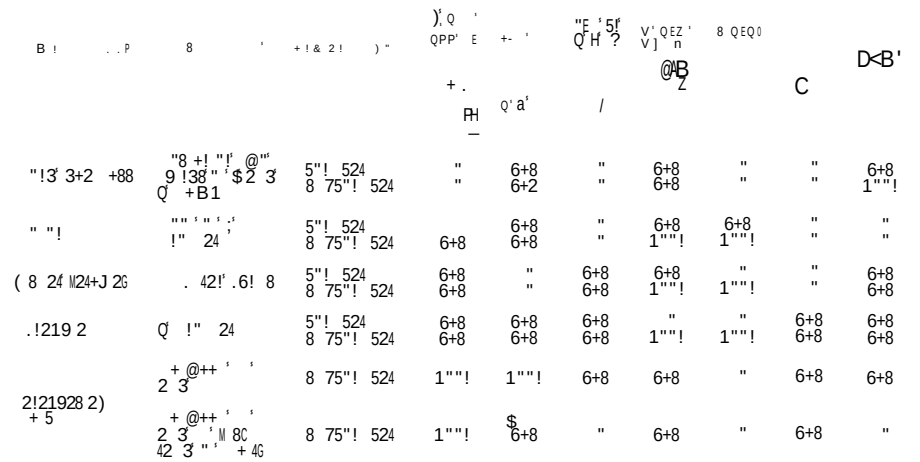
"!' 12! 24' 5" !8+8' ' 2 9!"1"4".6' 9+' .+ C +!24' + 3+ 56' 8++B8' "' 7+' "' 4 !+' 9+' 8 7C -+5 ' B2 +!' " ' 2 9!"1"4".6' "' 3+D+4"1' 9+' 3+2' " ' 9+' +D"4 " ' " ' B"3+! ' 8"5 + 6' !"B' 1! B D+' "!B8' 9+8+' 5" !8+8' 2!+' .+ +!2446' +4+5 D+' 2 3' 9+ !' 5"!!+42 " ' @ 9' " 9+!' 8 7C -+5 8' 8' " 'D+!6' B2 +' '@" 43' 8++B' 92 ' 9+' .+ +!24' 5 " '" '2'5" !8+' '2 9!"1"4".6' @" 43' 7+' "' . D+' "' 9+' 8 3+ '2'@ 3+!'D +@' " ' 9 8 "!6' 92 '52 '7+' "7 2 +3' !"B'2'5" 8 3+!2C " ' " ' 9+' 42 +!' 9 8 "!6' " ' 9+' !"1+2 ' !25+' 24" +' 2 3' 92 '2' ! +' 211!+5 2 " ' " ' 9+' 8 .C 52 5+' " ' 9+' 259 +D+B+ 8' " ' " !' 5 D 4 I2 " ' ' !+42 " ' "' 9+' 259 +D+B+ 8' " ' " 9+!' !25+8' 52 ' 7+' 2 2 +3' 9+' +88+ 24' 3 5 4 6' ' 9+' + +5 D+' 8+' " ' 2 9!"1"4".6' "!' 9+8+' 1 !C 1"8+8' 4 +8' ' 9+' 25 ' 92 ' 9+' 5"44+.+' 8 3+ ' 52 '92!346' 7+' 4+3' 7+6" 3' 9+' B"8 '.+ +!24' 25 8' " ' 9 8' 85 + 5+' 2 3' 92 '5" 8+R + 46' 9+' 5" C 5+ !2 " ' " ' 9 8' 2 + " ' 1" ' 9+' 8 7-+5 ' 8' 23+R 2 +' ' B .9 ' 8++B' 92 ' 9+' B+ 9"3' @9 59' 928' 7++ ' 3+D+4"1+3' '2' B7+!' " ' 8 C " 8' " ' 4 I .' 2 9!"1"4".6' 28' 2 ' !"C 3 5 " ' "' 8+B E9 8 "! 524' 5" !8+8' 8' B"!+' 1!"B 8 .F 7 ' ' 8' 5+! 2 46' +5+882!6' 92 ' 9+' 2 4 2 " 8' 7+ @++ ' 9 8' 8 7-+5 ' 2 3' " 9+!' !+42 +3' 8 7-+5 8' 89" 43' 7+' B23+' 54"8+!' 92 ' 9+6' 2!+' 2 ' 9+' 1!+8+ ' B+ 4+B+ 2!6'2 3' +5" 32!6' 59'"48 ' ? ' "!+' "!' 4+88' 8 55+88 4' 2 +B1 8' 92D+' 7++ ' B23+' 3 ! .' 9+' 428 ' ++ ' 6+2!8' "' 4 I+' 9+' !+8 4 8' " ' 2 9!"1"4".6' "!' 9+' 1 !1"8+8' " ' +4+B+ 2!6' 2 3' 8+5" 32!6' +3 52 " ' "!' 8"B+' B+' B 59' 8 !+88' 928' 7++ ' 42 3' 1" ' 9+' 9+"!6' " ' !+521 42 " ' M8++' = = 255"!3 .' "' @9 59' 9+' 3+D+4"1B+ ' " ' 9+' 59 43' 89" 43' "44"@' '2' @26' 9+' .+ +!24' +D"4 " ' " ' 5 D 4 I2 " F 8"' 92 ' 9+' "55 12C " 8' " ' 9+' 6" .' 59 43' 89" 43' 7+' 8 B 42!' "' 9+' B2 +8 2 " 8' " ' 4 +' 2B" .' 1! B D+' 1+"14+' @9 4+' @ 9' 5!+28 .' 2.+' 9+' 5"BC 14+J 6' " ' "55 12 " 8' 89" 43' 5!+28+' '2' @26' 5"B 12!274+' "' 9+' 3+D+4"1B+ ' " ' 5 4 !+' ' 7+4 +D+' 9 8' 1" ' " ' D +@' 928' 7++ ' +88+ 2446' 3 852!3+3 ' @9 4+' 2 ' 9+' 82B+' B+' 9+' 54 2C " ' !+B2 8' " ' 4 I .' 2 9!"1"4". 524' B2 +C ! 24' ' 9+' +2!46' 8 2.+8' " ' B2 24' !2 .' 2 3' 248"' 5" +5 " ' @ 9' 9+' +259 .' " ' .+".C !2196 ' 9 8 "!6 ' 2 3' 4 +!2 !+' ' 8+5" 32!6' 859'"48' 9+' 2 +B1 ' 928' 7++ ' B23+' "' 3+D+4"1' 9+' " 32 " ' " ' 9 8 "!6' " ' 2 ' 2 9!"1"4". C 524' 728 8F' 2 3' 9+!+' 8++B8' 4 4+' 3" 7 ' 92 ' 2' B 59' 7!"23+!' D +@' " ' 9+' 3+D+4"1B+ ' " ' 8"C 5 + 6' 52 '7+' 2 2 +3' 76' 126 .' 2 + " ' "' 9+' +2!4 +8 ' 9 8 "!6' " ' D+ " ' "' 9+' 5" ! 7 C " 8' B23+' "' " !' 5 D 4 I2 " ' 76' 3 +!+ ' !25+8' 2 3' "' 9+' 5" ! 7 " 8' " ' B2 ' 2 3' @"B2 ' "' 9+' 23D2 5+' " ' 5 D 4 I2 " ' '

' ? +' ▫

% ' M;D)1"a!"8' B2 ' 2 3' " "D' 1" 8" G ? ' +!B' 8+3' 76' 9+' "43+!' +!B2 ' D+8 .2 "!8' "' 3 52 +' 9+' 1" 8" ' 8 11"8+3' "' +J 8 ' ' +J1 !+3' 2 !' +5+ ' C D+8 .2 " 8' 76' +!.+6' 2 4' "' 3' 1"8 D+' 1!"" ' " ' 2 6' D"42 4+' "!.2 5' 1" 8" ' ' +J1 !+3' 2 !' 2 3' 3 52 +' 92 ' 9+' 723' + +5 8' 3 +' "' D+ 42 +3' !""B8' 2!+' 59 + 46' 52 8+3' 76' 9+' +J !+B+' 9+2 ' 2D"!274+' 5" 3 " 8' " ' 9 C B 3 6' 2 3' 1+!9218' 9+' 723' "3"!8 ' 2 3' 8+D+!24' " 9+!' 25 "!8 ' 2' D +@' 5"!!"7"!2 +3' B"!+' !+C 5+ 46' 76' 9+' D+8 .2 " 8' " ' 2 4' ' !+8C 42 ' ' ++' = = = = = = = = " ' ' ' ' ? "59' @28' " 3+3' " ' 4" .' 2 +!' ;## = 2 3' +D+ ' ' 1!+E 9! 8 2 ' B+8' @28' 5+4+7!2 +3' 28' 2' 5+ +!' " ' +44+5 24' 4 +' ' 9+' " ! 9' 5+ C !6' = ' @28' 9+' 9 !3' 5 6' ' B1"! 2 5+' ' 9+' @"!43 ' 2 3' 9+' !8 ' " ' 9+' "B2 ' B1 !+' ' 9+' 28 ' 2 3' @28' 2' 2B" 8' 8+2 ' " '8"19 8 524 ' "!' "!2 "! 524 '8 36 ' 9+' B "8 ' " ' " !' "!B2C " ' 27" ' 9+' 59'"4' " ' "59' 8' "7 2 +3' !"B' 72 8' @9"' @28' 2' 2 D+' " ' 9+' 5 6' 2' +259+!' 9+!+' !"B' ;P=' "' 9+' 6+2!' " ' 9 8' 3+2 9 ' ;<=' 2 3' " +' " ' 9+' B "8 ' 2B" 8' 8"19C 8 8' # " '" +259+!8' " ' "!2 "!6C " ' 9 8' B+ 9+!+' 8++B8' "' 92D+' 7++ ' 2 ' "59' ' 9+' " ! 9' 5+ !6' = 2' 2 !46' @+44' "!.2 !+3' 859'"'4' 868 +B ' 9+' 859'"'4' M5244+3' 2' % & " ' @9 59' 72 8' @28' 9+' 9+23' 5"BC 1! 8+3 ' 7+8 3+8' 9 B8+4 ' " !' S' !9+ "!8'T' M8++BC .46' +259+!8' " ' 9+' B "!+' +4+B+ 2!6' "!' +59C 524' 8 3+' " ' "!2 "!6C 2 3' 2 ' 4+28 ' " +' S .!2BC B2! 2 T' 28' @+44' 28' 1!"72746 ' 2 ' " +' B+' 2' +259+!' " ' 2 ' 2 3' 2' +259+!' " ' 42@' 259' " ' 9+8+' 28' @+44' 28' 72 8' 9 B8+4 ' @28' ' !+5+ 1 ' " ' 2 ' " 5 24' 8242!6' M@9 59' ' 9+' 528+' " ' 9+' 3+!' +259+!8' @28' 12 3' 76' 9+' 5" 5 4 ' 2 3' ' 9+' 528+' " ' 72 8' 52B+' 12! 46' !"B' "59' 2 3' 12! 46' !"B' 9"+ 5 2C ' 2 3' 9+6' !+5+ D+3' 9+ !' 211" B+ ' !"B' 9+' 4"524' 5" 5 4F 72 8L8' 1"8 " ' @28' 2 ' B1+! 24' + 3"@B+ ' 28' 8' 89"@ ' 76' 9+' 25 ' 92 '12! ' " ' 9 8' 8242!6' 52B+' !"B' " 8 3+' 9+' 5 6' 92 ' 9+!+' @+!+' " 9+!' 859'"48' " ' 9+' 8"!' 2 ' "59' 8' 1!"7274+F 1"88 746 ' 9"@+D+!' 9 8' @28' 9+' " 46' !9+ "! 524' 859'"'4' 9+' B+B7+!8' " ' @9 59' !+5+ D+3' 9+ !' 211" B+ ' !"B' 2 3' @+!+' 12 3' 76 ' 9+' 8 2 +' 9+!+' B 26' 92D+' 7++ ' 2' 859'"'4' " ' 19 4"8"19+!8 ' 28' 9+!+' @28' ' 9+' + .97"!C .' "@ ' " ' 12B+2 ' 2 3' 9+!+' @+!+' 1!"72746' 8"B+' 1! D2 +' 859'"48' @ 9' +@+!' 8 ! 5 "!8 ' 8' 5+! 2 ' 92 ' 9+!+' @+!+' " 9+!' " 5 24' 8"19 8 8' 2 ' "59 ' 7 ' @9+ 9+!' 9+6' @+!+' 9+' +238' " '859'"'48' 8 B 42!' "' 9+' 859'"'4' " ' 72 8' 8' " ' A "@ ' @"' " ' 9+8+' " 5 24' 8"19 8 8' 1!"72746' "55 1 +3' 592 !8' @9 59' @+!+' B1+! 2446' + 3"@+3 12! ' !"B' 9+' 859'"48 ' 9+!+' @+!+' " 9+!' 3 D 3 24 ' +259+!8' " ' D2! " 8' .!23+8 ' @9"' 923' "' " 5 24' 211" B+ ' 44' 9+8+' ".+ 9+!' @ 9' 9+' 859'"48' 27"D+' B+ " +3 ' 5" 8 +3' @92 ' B 26' 7+' 1244+3' 9+' 59'"4' " ' "59 ' 2 3' " ' 9 8' 859'"'4' ? ' " ' 8 B 146' " ' 9 8' "@ E 5"!18' " ' !9+ "!8' ? ' 72 8' @28' 9+23 ' 9+' 44' 3+ 2 48' " ' 9 8' " 5 24' !+42 " ' "' 9+' D2! " 8





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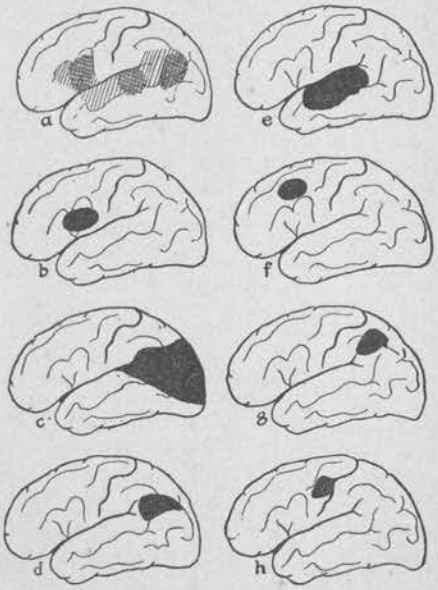
9+ 9 8 "!6 " 9+ 21928 2 3"5 ! + 8 2 +JC 5+44+ +J2B14+" 9+ 1"1 42!B+ 9"3" 18659"4C ". I ! "! 2112!+ 46 928 7++ 25 46 28C 8 B+3 92 9+ 2 2468 8 " B+ 24 86B1 "B8 8 +J !+B+46 8 B14+ !8 9+ 81++59 288"5 2C " B+592 8B @28 3 D 3+3 " 8+ 8"!6 2 3 B" "! 2 3 2 9+ 1!+8+ B+ 9 8 3 D 8 " 8 8 44 3++B+3 82 8 25 "!6 76 8"B+ 2 +! +259 " 9+8+ .+ +!24 "!B8 @28 8 73 D 3+3 " @"F 9+ 8+ 8"!6 " D 8 24 2 3 2 3 "!6 2 3 9+ B" "! " D"524 2 3 @! . 92 " 9+ 18659"4". 524 8 3+ 8 9 2 3 D 8 " 3"+8 " !+1!+8+ 9+ 25 8 8 +D 3+ @9+ 2 2 2468 8 " 81++59 5 " 8 3+! 2A+ 9+ @268 @9 59 3+28 B 26 7+ 5" D+6+3 2!+ .!+2 +! 92 " ! 2 3 !+R !+8 " .!+2 2 246 C 524 8A 44 "89"@ 92 2 3"I+ 3"+8 " +J92 8 9+ 1!"727 4 +8 2 6 3 D 3 24 @9" 8 8 8C 1+5 +3 " 2 25R !+3 81++59 3+ +5 9+ "44"@ . 8 9+ B B B " 5" 3 " 8 92 89" 43 7+ D+8 .2 +3 " 3+B" 8 !2 + 2 3+ +3 8 !7C 2 5+ " 9+ 81++59 B+592 8B ? M$G ("4 2!6 81++59 9+ 27 4 6 " 9+ 3 C D 3 24 " B2A+ 9 8 @2 8 A "@ " 52!!6 " 2 5" D+!82 " + 5 F MQG !+23 .24" 3 1! +3 2 3 @! + @"!38 92 9+!+ B 26 7+ "7 2 +3 2 3+2 " 9+ 27 4 6 " 288"5 2 + D 8 24 2 3 B" "!F M;G !+23 . M " +5+882! 46 24" 3C 1! +3 2 3 @! + @"!38 2 3 3 52 .76 25 " 8 M81++59 "!76 2!B8 4+.8 + 5 G 92 9+ 8+ 82 " 8 @+!+ 3+!8 ""3 "! 211!+5 2 +3F M=G @! . !"B 5"16 M5" +5 " 7+ @++ D 8 24 2 3 B" "!GF MPG @! . !"B 3 5 2 " M5" +5 " 7+ @++ 2 3 "!6 2 3 B" "!GF M&G @! .81" 2 +" 846F MOG !+1+2 .@"!38 92 2!+ 81"A+ M5" +5 " 7+ @++ 2 3 C "!6 2 3 B" "!GF M>G 3+!8 2 3 . " 81"A+ 42 . 2.+ 28 89"@ 76 9+ 27 4 6 " 9+ C 3 D 3 24 " !+81" 3 2 211!"1! 2 + B2 C +!F M<G !+5". " "7-+5 8 2 3 9+ ! 8+ 28 3 52 +3 76 9+ 27 4 6 " 9+ 12 + " 2A+ 2 "7-+5 E 9+ 92 3 "!+J2B14+ "!" 4""A 2 + 5 2 3 "89"@ 76 25 " 9"@ 9+ 12! 5 42!"7-+5 8 "7+ 8+3F M$#G 2B . " "7-+5 8F M$$G 288"5 2 " " 2B+ 92 8 8++ "!9+2!3 @ 9 2 "7-+5 92 8 8+ 8+3 9!" .9 D 8 24 2 3 "!6 25 24 "4 25 "!6 . 8 2 "!6 "!9+ 8"E5244+3 8 +!+". "8 5 8+ 8+8 6 " + " 9+8+ 81++59 288"5 2 " 8 B26 7+ @2 .2 3 9+!+2!+ B2 6 1"88 74+5"B7 C 2 " 8" 3 8"!3+!8 28 928 7++ 3 52 +3 27"D+ 9+ 5"B7 +3 3 8"!3+!8 2!+ 28 928 7++ 82 3 B"8 5"B B" 2 3 1"88 746 9+ 8"4+ 54 524 "!B8 "!3 85 88 " 9"@+D+! @+ 89244 288 B+ 9+ "55 !!+ 5+ " 9+ 8 B14+ 61+8 2 3 . D+

their anatomical correlates. The description of the anatomical localization of speech functions may well be introduced by a brief general consideration of the relation of the nervous system to mental states.

Neurologists, physiologists, and most psychologists assume for the cerebrum a multiplicity of function, with the capacity for unification. All the functions that the cerebrum has may, for convenience, be classed as sensory, motor, and associational. (See for full detail the article on the NERVOUS SYSTEM, especially that dealing with the cerebrum.) All of these functions are mediated through the cerebral cortex and the connecting fibers or through the collections of cells in certain places, which collections are called basal ganglia. The collection of cells making up the basal ganglia may for present purposes be disregarded. We may say that any definite collection of cortical cells or of fibers differs in function from all other collections, although all are cross-connected and in the most intimate anatomical and functional relation. This is the general ground from which all the anatomical localizations of speech functions arise.

On the psychological side, the aspects of speech are sensory, motor, and associational. These three groups may be further subdivided into: sensory — visual, auditory, gustatory, tactual, olfactory, etc.; motor — vocal speech, writing, gesture, the production of print or of other symbols, etc.; and association — the connection between any two or more of the sensory and motor elements. Each of these arbitrarily divided elements is conceived to have a seat or to have its center in some part of the cerebrum (similarly arbitrarily divided). The normal speech function persists only so long as the separate brain areas are intact and the connections unbroken. If any area becomes diseased by reason of hemorrhage, the choking of an artery, or from any other kind of injury, certain functions will be interfered with, but it will be possible to have certain other functions carried on in a normal manner. Thus it is with the speech centers and their connections. If the centers be affected certain definite functions will be lost or impaired, and if the association tracts are interfered with, there will be losses of speech, but of different kinds to the losses observed after destruction of the cortical areas, because the connections have been broken rather than the storehouses. Lesions of appropriate portions of the cerebrum may result, therefore, in a number of different kinds of aphasia, simple or complex, depending upon the location of the injury and upon the number of "centers" or "connections" involved. The foregoing table gives the symptoms in ten of the rather simple uncomplicated aphasias, and it is possible from this table to reconstruct others in which the combinations of aphasias are represented.

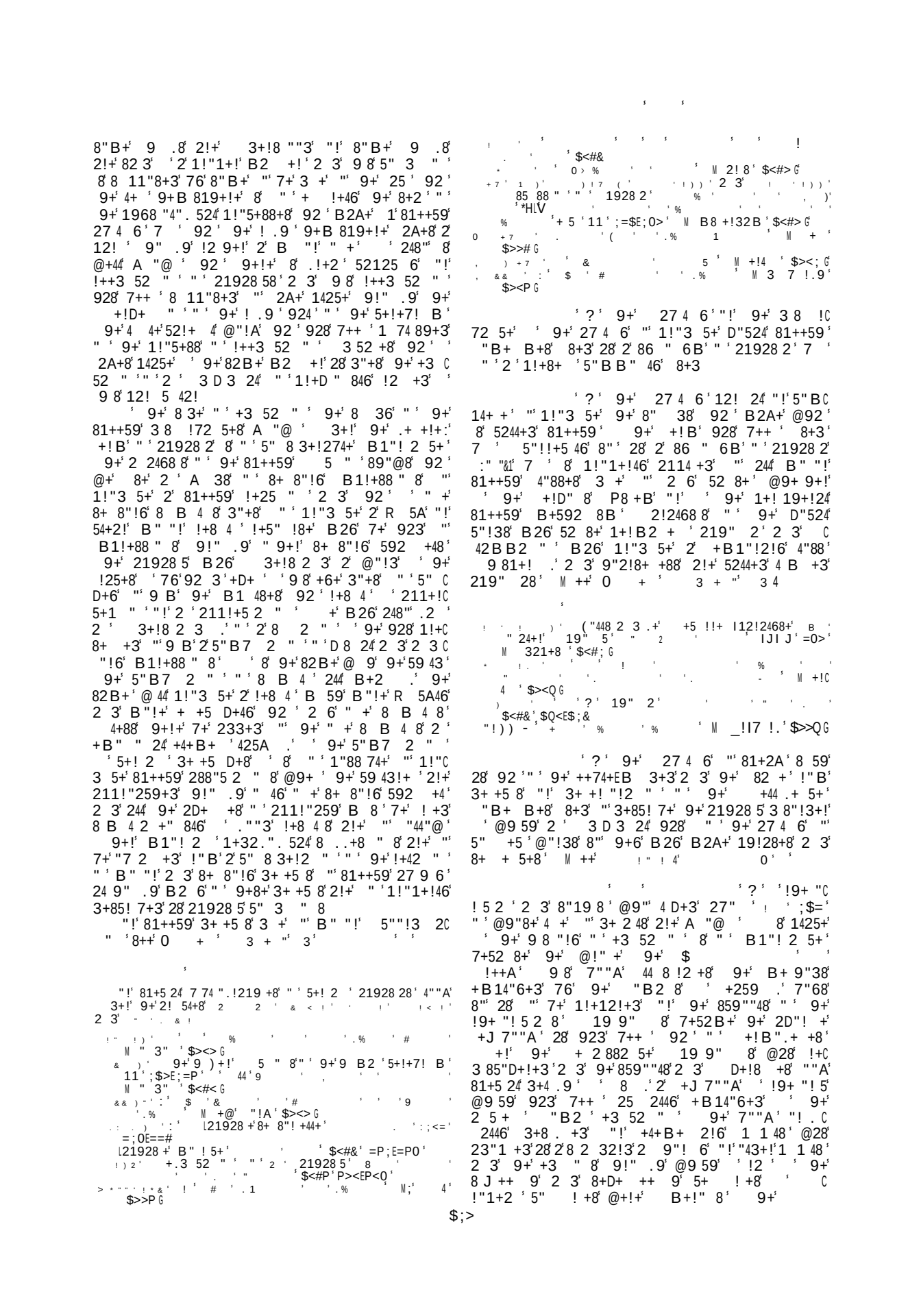
The cerebral localizations of the simple aphasias are noted in the table, and some of them are shown in the accompanying diagram. In addition, there are given the location of certain lesions not productive of aphasic conditions. It will be noticed that the so-called

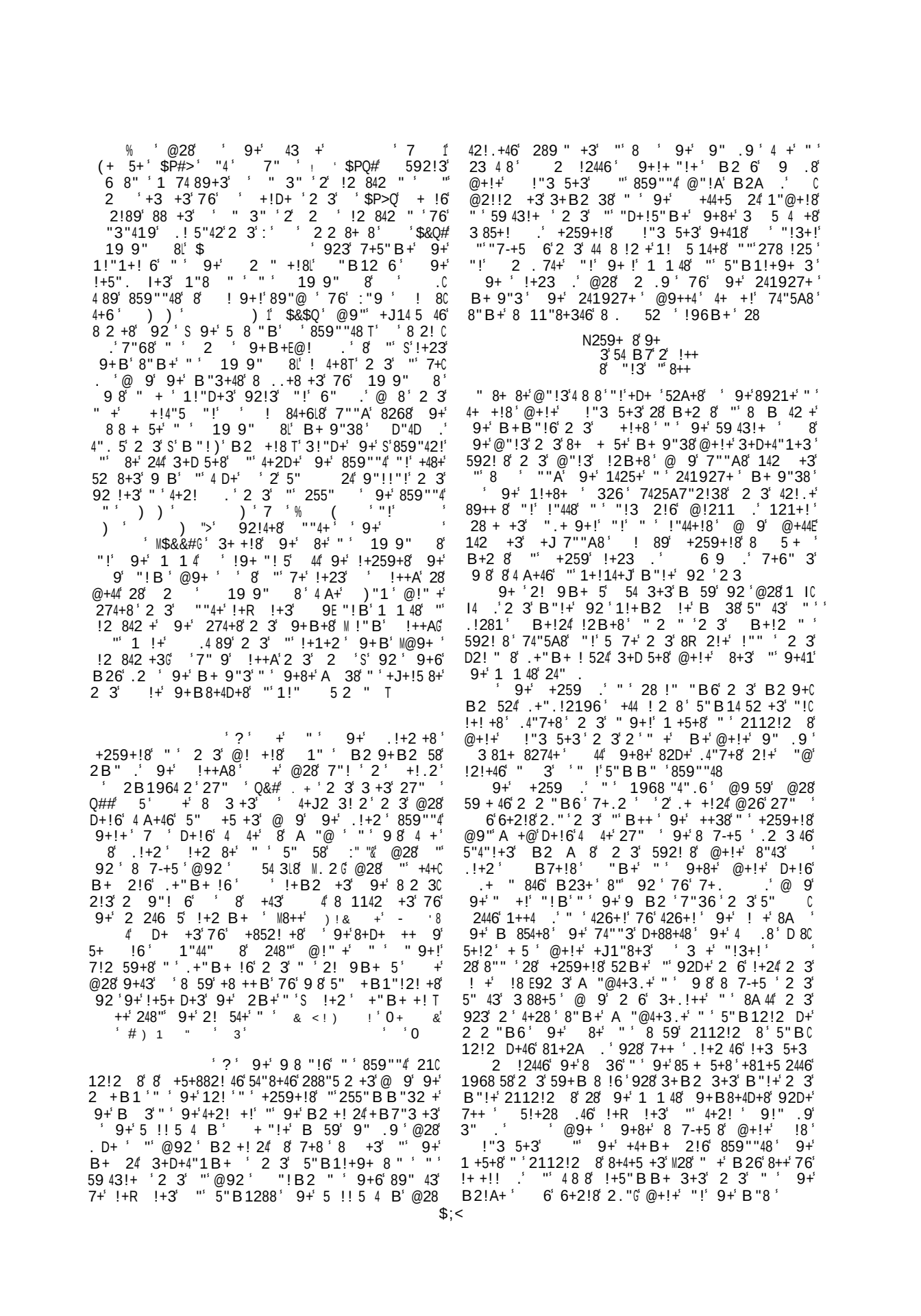


Illustrating the localization of cortical brain lesions productive of aphasias and other defects. (*a*) The general localization of the speech centers, according to Dejerine. The cross-hatched portions are those most intimately concerned with the speech functions. (*b*) Localization of a blood clot that produced a simple motor aphasia (Hotchkiss). (*c*) Lesion of cortex, productive of psychical blindness. (*d*) Anatomical localization of a lesion in a case of alexia (Pick). (*e*) Cortical destruction, productive of word-deafness (Wernicke). (*f*) Localization of cyst, causing spasm of head and eyes, without aphasia (Starr). (*g*) Lesion causing astereognosis. (*h*) Lesion causing paralysis of hand and arm.

motor aphasias (vocal and writing) are due to lesions of the frontal lobe on the left side, close to the centers for the movement of the right hand, arm, and face, and that the so-called sensory aphasia centers border upon the sensory areas in the posterior portion of the hemisphere. The subcortical aphasias cannot be represented on this diagram, but the location of the lesions causing these conditions may be made fairly well if the motor speech centers are connected by lines with the sensory areas, and lesions supposed to exist at some portion of the lines which are drawn. It will be noticed that many of the lines approach the part of the cerebrum called the Island of Reil, and in this region we do, in fact, find many lesions causing aphasias of the subcortical varieties.

In no case of aphasia due to unilateral cerebral lesion is speech entirely lost; a certain amount of ability to understand, if it be a sensory aphasia, or ability to vocalize, if it be a motor aphasia, remains. It is possible to show that





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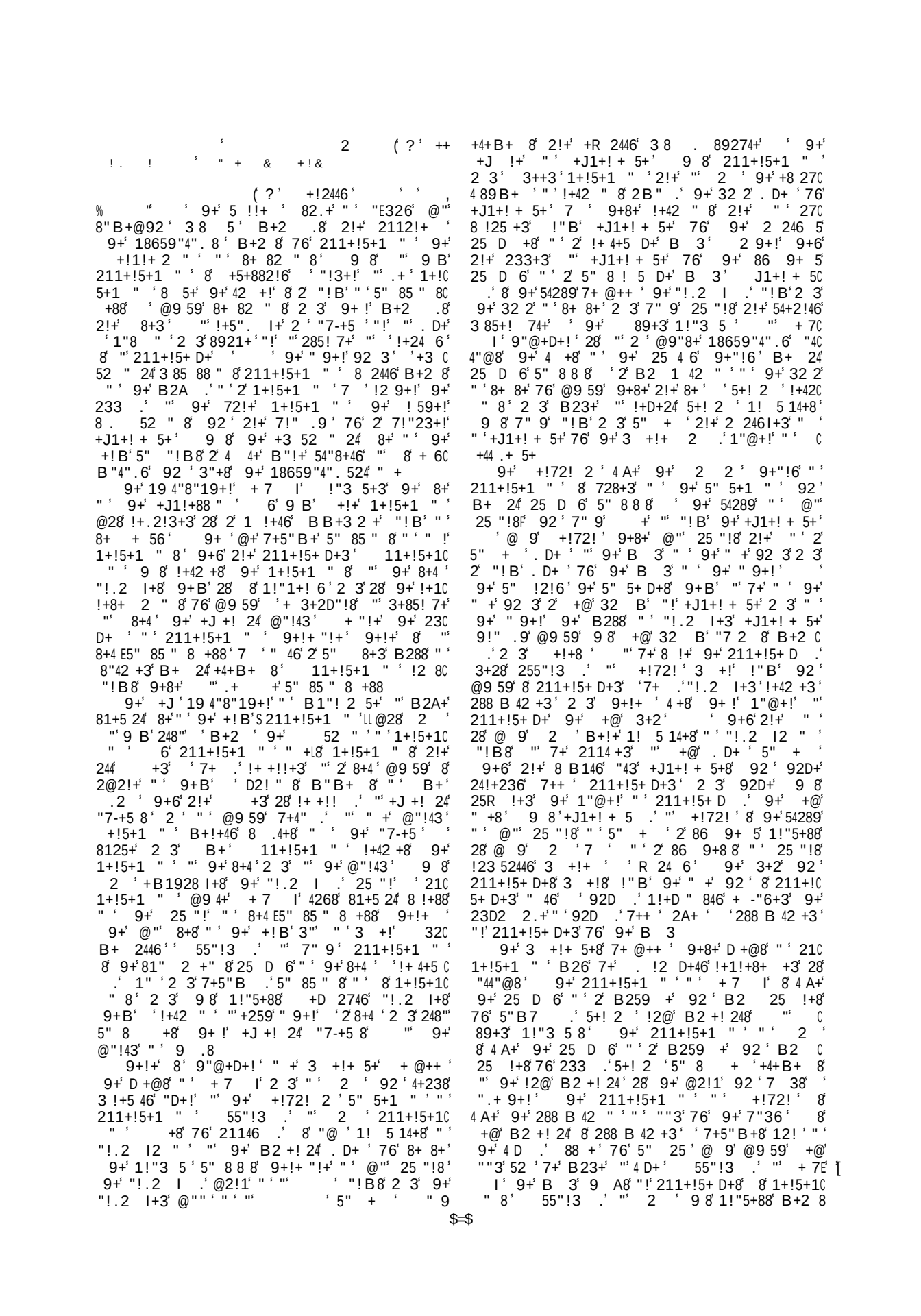

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4". 524' 8' +D 274+' "!3+!' 9+' 59 43' B 8'
1288' 9!" .9' 9+8+' 8 2.+8' 7+52 8+' 9+' 2 !+'
" ' 9+' B2 +! 24' " '5 4 !+' 8'8 59' 92 '+259'8 2.+'
8' 9+' 4". 524' 2 3' +5+882!6' 1!+12!2 " ' "!'
9+' 211+!5+1 " ' " ' 9+' +J ' +!+' @+' 3'
9+' D +@8' " ' +88 .' +!3+!'2 3' +.+4' +!E
72! ' @9"' 9 B8+4' .2D+' 2' 8 ..+8 " ' "@2!3' 9+'
5 4 !+' +1"59' 9+"!6' B26' 7+' 82 3' "' 92D+'
" 3' ' 9 8 "!6' 9+' 54+@' "' 9+' 4". 524' "!3+!'
" ' 211+!5+1 "

9+'8+5" 3'5" 8 3+!2 " ' 92 '4+3' "' 9+'5 4C
!+' +1"59' 9+"!6' @28' 92 ' " ' 18659"4". 524'
!+521 42 " ' 9 8' D +@' @28' B2 +46'
!+42 +3' " ' 2 3' 3++3' " 3+3' 1" ' 92 ' " '
7 "4". 524' !+521 42 " ' 55"!3 .' "' ' 9+'
59 43' B2 +8 8' 8 55+88 D+46' 5+! 2 ' 8 5 8'
9+8+' 8 5 8' 211+2!' ' 9+' "!3+!' " ' 9+ !'
!25 24' +D"4 " ' 1" ' 9+B' 3+1+ 3' 9+'
59 43!8' +!+8 8' 2 3' 25 D +8 ' 2 3' 1" ' C
+!+8 ' 2 3' 25 D 6' 3+1+ 3' 9 8' 27 4 6' "' 211+!E
5+ D+' "' +259' 2' 59 43' " ' &' @92 ' 211+248' "'
8 5 8' 92 ' 3"' " ' 3+D+4"1' 4' $Q' 8' "' 2 4'
+!46' ' !+8 4 8' 9+' 59 43' 211+!5+ D+8' " 46'
@92 ' 9+' 8' +!+8 +3' ' 2 3' 9+' 8' +!+8 +3'
" 46' ' 92 ' @9 59' 211+248' "' 8 5 8' 92 '
92D+' 2 ' 4+28 ' 7+. ' "' ! 1+

55"!3 .' "' 9+' !8 ' 9+' +!72! 2 ' 5" C
5+1 " ' " ' 5 4 !+' +1"598 ' 9+' 425A' " ' 211+!C
5+1 " ' @9+ ' 5 4 !+' B2 +! 24' 7+4" . .' "'
42 +!' 5 D 4 I2 " 8' 8' 1!+8+ +3' "' 2' 6" .' 59 43'
8' 3 +' "' 9+' 425A' " ' +J1+! + 5+' 55"!3 .'
"' 9+'8+5" 3'5" 5+1 " ' ' 8' " ' 9 8' 52 8+3'
7 ' 8' !2 9+!' 9+' !+8 4 ' " ' B B2 ! 6' " ' 9+'
8 5 8' "' @9 59' 9+' 3+28' 2 3' ++4 .8' " ' 9 8
42 +!' 5 4 !+' 211+24 ' "' 2 B" ' " ' B+!+'
+J1+! + 5+' @ 9' @"!38' 2 3' 25 8' 52 ' B2A+' 2'
59 43' " ' >' 5"B1!+9+ 3' 446' 24+8' " ' !"B2 5'
4"D+' +!+' 1968 524' B2 ! 6'7! .8' @ 9' ' 2'
16859"4". 524' B2 ! 6' 92 ' 2 +!' 2 ' 5" 8'
B"8 ' "!' 1"@+!' " ' 211+!5+1 "

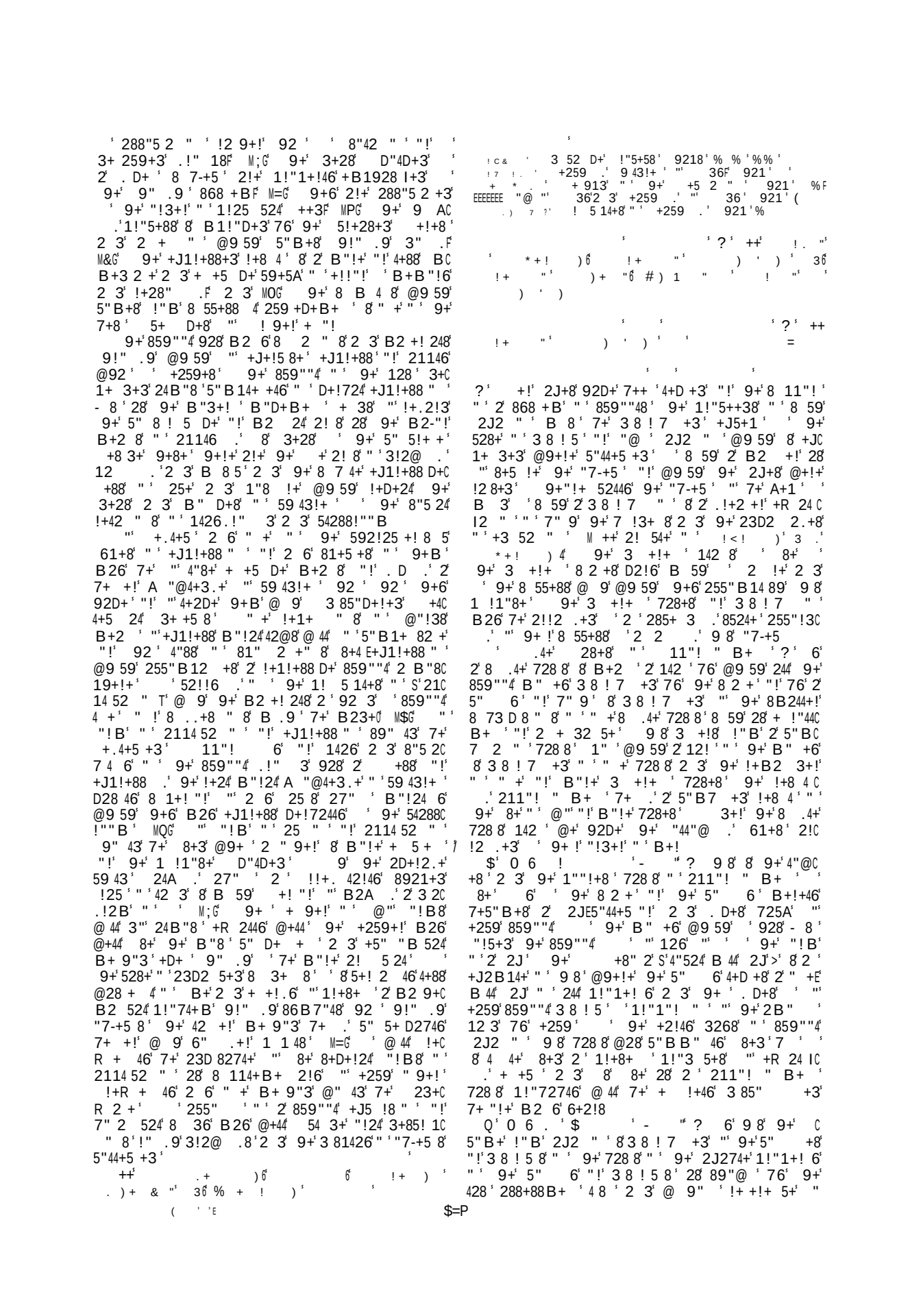
"' 2!' 28' 9+' 5 4 !+' +1"59' 8' 5" 5+! +3 ' '
8' 3" 7 4+88' ! +' 92 ' 7" 9' 4 +8' " ' 2!. B+ '
' 8 11"! ' " ' ' 2!+' ' 2' B+28 !+' - 8 274+'
' "!' 9+' !+2 B+ ' " ' 9+' 5" 5+1 " ' " '
211+!5+1 " ' 9+' 3 +!+ 5+8' 7+ @++ ' 9+B' 8'
" ' .!+2 ' B1"! 2 5+' '8+!D+8' 28' 2 ' !"3 5C
" ' " ' 2' B"3+! ' +!1!+ 2 " ' " ' 211+!5+1C
" '8"B+@92 '3 +!+ ' !"B' 92 ' " ' +!72! '
: 8 ' 28' @ 9' +!72! ' 211+!5+1 " ' 8' B23+' "'
3+1+ 3' 1" ' 9+' 25 D 6' " ' 1!+D " 846' 288 B C
42 +3' 3+28 ' 8 +23' " ' 28' "!B+!46' 1" ' 92 '
" ' 278 !25 ' 25 4 +8 ' 8"' ' 9 8' B"3+! ' 9+"!6'
' 8' B23+' "' 3+1+ 3' 1" ' 9+'25 D +8' 2 +3'
76' 9+' 8 5 8' !2 9+!' 92 ' 1" ' 9+' B+!+'
5 " .' " ' +J1+! + 5+' 25R !+3' +2!4 +!' 76'
9+' 3 D 3 24 ' 9 8' ' 2' 8+ 8+' 9+' B"!+'
B"3+!' + 3+ 56' 928' 7++ ' "' !+D D+' 9+' " " '
" ' 2 ' +!' 25 D 6' 4P3 .' 7+9 3' 9+' B+ 24'
5" + ' 2 3' D D ;3 .'

9+!+' 2!+' @"' B+ 9"38' " ' 5" 5+ D .' 9 8' C
+!' 25 D 6 ' 55"!3 .' "' 9+' " +' 9+'5" 5+1C
" ' " ' 3 ' 211+!5+1 " ' 8' S' 9+' 25 D 6'
" ' 9+' @ 44' ' 9+' !+24B' " ' 3+28 T' 9+' @ 44' 8'
2 ' 2.+ 56' 3+ +!B 2 D+' " ' 9+' 3 !+5 " ' " '
2 + " ' 2 3' ' 4 44 .' 9 8' 5 " ' ' 4 8'
5+! 2 ' 3+28' "' 9+' "5 8' " ' 5" 85 " 8 +88' "!'
211+!5+ D+8' 9+B ' 55"!3 .' "' 9+' " 9+!' 5" C
5+1 " ' 211+!5+1 " ' 8' 5 3+ 24' "' 9+' 5C
" .' " ' 9+' 8 5 D+' 25 D +8 ' 9+ '
9+8+' 25 D +8' B++ ' 2' 59+5A' 92 ' 8' @9+ '
9+6' 2 4' "' .2 ' '2 '2 "B2 5' B2 +!' 9+' !+C
8 4 8' "!' @9 59' 9+6'+J 8 ' 9+ ' 3 882 8 25 " ' 8'
2!" 8+3' 2 + " ' 8' 3!2@ ' "' 9+' 8 2 " ' 8'
592!25 +! 8 58' 2!+' 2 246 I+3 ' 2 3' +D+ 2446'
9+ !' 8 . 52 5+' 8' 8"' +!1!+ +3' 92 ' 2' 82 8C
25 "!6' 4+2! +3' !+25 " ' 8' 8 78 +3' "!' 9+'
"! . 24' 8 5 D+' " +' 9 8' 211+!5+1 " '
8' 2' B+ 24' 25 D 6' !" 8+3' 76' 9+' ++3' " '!+23C
- 8 B+ ' 2 3' "1+!2 D+' " 46' " ' 9"8+' 25 "!8'
92 ' B 8 ' 7+' 3 8 . 89+3' 2 3' +!1!+ +3' '
"!3+!' "' 8+5 !+' 9 8' !+8 4 ' 8 +23' " ' 7+ .'
B+!+46' 2' 5 " ' " ' 1!+D " 8'+J1+! + 5+' ' 8'
!2 9+!' 2' 5 " ' " ' 9"8+' +!' 8 5 D+'
++38' 2!" 3' 9+' 82 8 25 " ' " ' @9 59' 7" 9'
9+' 1968 524' 2 3' 9+' B+ 24' 25 D +8' " ' 9+'
3 D 3 24' 5+ +!

9+' 3 2 ' 9+"!6' 3 +!8' !"B' 9 8'
8 5 EB" "!' 9+"!6' " ' 211+!5+1 " ' " 46' '
92 ' 2 +!' 9+' 289 " ' " ' + 7 I' 2 3' 2 '
' +B1928 I+8' !2 9+!' B"!+' 9+' 81" 2 +" 8'
25 D 6' " ' 2' 1 !+46' B+ 24' 25 "!' 9+' B 3'
' 211+!5+1 " ' 255"!3 .' "' 3 ' 288+! 8'
8+4 ' J .' 9+' 2 + " ' 542! 6 .' 9+' 3+28 '
2 3' 9 8'!" 8 .'5+! 2 '5"!!+81" 3 .' 1968 "C
4". 524' 25 D +8 ' +' ++4' " !' B+ 24' + +!.6'
+!D2 .' 9+' B 854+8 ' 11+!5+1 " ' 8'5" 2C
" ' ' 8' 9+' 8 ! ..4+' " ' 9+' @ 44' "' 3+ +!C
B +' 9+' 5" 3 5 ' " ' 9+' 3 D 3 24 ' 9 8'
' 8' B B+3 2 +46' 5" +5 +3' @ 9' B"D+B+

$=;

$==



@9+ 9+!' 9+' 2J+8' "!' 9+'6+2!'92D+'7++ '12 3'
"!' " ' ' 9 8'428 '!+81+5 ' ' 8' B"!+'- 8 ' 92 '
9+' 1!+5+3 .' 728 8 ' 7+52 8+')' 1!"D 3+8' 38'
"!' 9+' B2 + 2 5+' " ' 859""48' " !' 9+' +3 52)E
" ' " ' 9+' 59 43!+ ' @9+ 9+!' 9+ !' 2 9+!8' 92D+'
7++ ' 274+' "' 126' 9+ !' 2J+8' "!' " ' 9+'
728 8' 8' 8+3' 76' + 864D2 2' "!' 9+' 3 8 ! 7 C
" ' " ' " +' 9 !3 ' 2 3' 76' +@' :+!8+6' "!' 9+'
3 8 ! 7 " '" '<#1+!'5+ ' " ' 9+'8 2 +'211!"1! 2C
" ' A+' 9+'1!+5+3 .'728 8 ' '@28' " 5+'B 59'
8+3 ' 7 ' 928' "@' 7++ ' 272 3" +3' 76' +2!46'
244' 8 2 +8 ' ' 1"88+88+8' "' +3 52 " 24' 8 .C
52 5+' 2 3' 1!"3 5+8' 4 4+' +R 24 I .' + +5
;' 0 ' $) ' - "' ?' 9 8' 728 8'
B2!A+3' 2' !8 '8 +1' "@2!3' 2' 3 8 ! 7 " '7+2!C
.'8"B+' !+42 " ' "' 9+' B7+!' " ' 59 43!+ ' "'
7+' +3 52 +3 '2 3'@28' " 5+' 8+3' B 59' B"!+' 92 '
' 8' "E326 ' +@' "!A' 8 4 8+8' '28' 2' 12! 24'
728 8' "!' 9+' 3 8 ! 7 " ' " ' 8 2 +' 38' 28'
248"' 3"+8' (+!B" ' 8' 3+ +5 8' 4 +' ' 92 ' 2'
5+ 8 8' 8' 2A+ ' " 46' !+R + 46 '@9 4+'592 .+8'
'1"1 42 " ' 2!+' !+R + '2 3' !21 3F 92 ' 9+'
" 24' 1"1 42 " ' 7+2!8' "' !+24' !+42 " ' "' 9+'
B7+!' " ' 59 43!+ ' ' 9+' 5"B B 6' +D+ '
' ! !24' 3 8 ! 5 8F 2 3' 92 ' ' 7+2!8' "' !+42C
" ' "' 9+' B7+!' " '859""48' 92 ' B 8 ' 7+'
B2 2 +3
='' '% ' $) ' - "' ?' 9 8' 8' 5"BC
B" 46' A "@ ' 28' 9+' 859""4' 5+ 8 8' 728 8 ' 9+'
B" +6' 7+ .' 3 8 ! 7 +3' '3 !+5 '1!"1"! " ' "'
9+' B7+!' " ' 59 43!+ ' " ' 859""4' 2.+' M8++'
0+ &) " * "4' ' 9+' 5" 6' "!' 3 8 ! 5 '
'211+2!8' 2 ' !8 '.42 5+' "' 7+' 2' - 8 '728 8 ' 2 3'
8' +J + 8 D+' 8+' ;>' 8 2 +8' 8 .' ' ' @9"4+' "!'
' 12! '28' 2' 728 8' "!' 9+' 3 8 ! 7 " ' " ' 859""4'
38' @" 43' 3 52 +' 92 ' ' 928' 7++ ' 8"' !+C
.2!3+3' 76' 4+. 842 "!8' 2 3' 859""4B+ ' 6'
52!+ 4 5245 42 " ' 28' "' 8' !+8 4 8' 9"@+D+!'
@ 44' 89"@' 92 ' ' 8' 2' D+!6' 82 8 25 "!6' 728 8'
"' 8+' ' 7+2!8' "' !+42 " ' "' 9+' !+24' 5"8 '
" ' B2 2 .' 859""48' D I ' 9+' B7+!' " '
+259+!8' @9"' B 8 '7+' +B14"6+3' "' +259' 9+'
59 43!+ ' '.!+2 46' 2D"!8' 9+'5 6' 28' "11"8+3'
"' 9+'5" !6 '2 3' 9+'42!.+' 859""4' 28' "11"8+3'
"' 9+'8B244' 859""4' ' 1425+8' "' 1!+B B'
" ' 9+' B2 6' +3 52 " 24' + "! 8' @9 59' 5"BC
B +8' 89" 43' 7+' + 5" !2.+3' "' B2A+' "!'
9+B8+4D+8' 8 59' 28' 9+' 1!"D 8 " ' " ' ."" 3'
+259+!8' 8B244' 54288+8' + "!5+B+ ' " ' 2 + C
32 5+' 42@8' 1!"D 8 " ' " ' +J !2' +3 52 " 24'
+ "! 8' 8"' 28' "' 2 !25 ' 2' 42!.+!' 1!"1"! " ' " '
9+' 59 43!+ ' "' 9+' 1 74 5' 859""48' 2 3' 9+'
2@2A+ .' " '2' 5"B B 6' 1! 3+' ' 9+'859""48'
9+B8+4D+8' "' 8 B 42 +' 2' 5"B B 6' "'
+3 52 " 24' 25 D 6' 8' B"!+' B1"! 2 ' 92 ' "'
!+3 5+' 8' 2J+8
P' ' - "' ?' 9 8' 8' 2' 3 8 5 ' 23C
D2 5+'"D+!' 9+'5+ 8 8'728 8 ' ' 92 '2'5"B B 6'
8' 12 3' " 46' "!' 9+' B7+!' " ' 59 43!+ ' ' .+ 8'
"' 9+' 859""48' "!' 2' 3+ +' 1+! "3' " ' B+'
8 +23' " ' "!' 9+' B7+!' " ' 2 4 +8' " ' 59 43!+ '
' .+ 8' " ' 9+'5+ 8 8'4 8 8' ' 8' 8+3' 28' 2' 728 8'
" ' 211"! " B+ ' ' +@' 2B189 !+' 2 3' '
+8" 2 ' @9+!+' 2' $#E326' 2 3' 2' =#E326' + C
!"44B+ '!+81+5 D+46 ' 2!+' !+R !+3 ' ' 1425+8
2' 1!+B B' " ' .+ .' 9+' 59 43' "' 9+' 859""4 '
2 3' ' +8" 2' " ' A++1 .' 9 B' 4" .' + " .9'
"' .+ '9 B' +!+8 +3' ' 9+' 859""4' @"!A' 9 8'
728 8 ' 9"@+D+!' B 8 ' 7+' !+.2!3+3' 28' 2' !2 C
8 " ' 728 8' !"B' 5+ 8 8' "' 32 46' 2 + 32 5+
&' ' + ' % ' - "? 9 8'
728 8' 8' 8+3' '@9"4+' "!' '12! '76' 2' B7+!' " '
8 2 +8' 2 3' 8' 2' 3 8 5 ' B1!"D+B+ ' "D+!'
2 6' 1!+5+3 .' 728 8 ' 8 +23' " ' 126 .' "!'
59 43!+ ' " '2' 5+ 8 8' !"44 ' "!' 59 43!+ ' + !"44+3' "!'
2' 4 B +3' B+ ' 126 B+ 8' 2!+' B23+' " 46' " ' 9+'
728 8' " ' 9+' 2D+!2.+' B7+!' " ' 59 43!+ ' !+C
2 +3' " ' 9+' !"448' " ' 9+' 859""4' 3 ! .' 9+'
+ !+' 859""4' 6+2!' ' 8' 2' "!B' " ' S' 126B+ '
76' !+8 4 8 T' 28' ."" 3' 32 46' 2 + 32 5+' 8' 9+'
!+8 4 ' " ' B2 6' 5"B B 6' + "! 8' @9 59' 89" 43'
7+' + 5" !2.+3 ' ' 8 B 42 +8' 5"B B +8' "'
+3 52 " 24' 25 D 6' 2 3' D"4D+8' 244' 92 ' 9+'
+ !"44B+ ' 728 8' D"4D+8' 2 3' B"!+
0' ' + ' % ' - "' ?' 9 8'
728 8' 8' 2 ' 2 +B1 ' "' B+28 !+' +D+ ' B"!+' 54"8+46'
9+' @"!A' " ' 9+' 859""48' 2 3' "' 126' " 46' "!'
9+' 25 24' 2 + 32 5+' D+!2.+' 2 + 32 5+'
8' 5245 42 +3' " ' 2D+!2.+' B+B7+!89 1' M8++'
8+12!2 +' 2! 54+8' "!' 3+ " 8' " ' +!B8G'
2 3' 9+ 5+' 54 3+8' 59 43!+ ' 7+4" . .' "' 9+'
859""4' 2 3' 278+ ' "!' 2' 326' "!' @"' 2 ' 2' B+'
28' @+44' 28' 9"8+' 25 2446' 1!+8+ ' . .!+.2 +'
3268L' 2 + 32 5+' " ' 9+' 5" !2!6 ' 54 3+8' " 46'
9"8+' 25 2446' 1!+8+ ' 5" .' 76' 924 ' 3268 '
2 3' 9+' " 24' 2B" ' "' 7+' 211"! " +3' 8' 3 C
D 3+3' 76' 9+' " 24' B7+!' " '3268L' 2 + 32 5+'
9 8' . D .' 2' 5+! 2 ' B7+!' " ' 5+ 8' 1+!' 59 43'
1+!' 326' "' 7+' 12 3 ' 9 8' 728 8' 8' 9+' B"8 '
255 !2 +' " ' 2 ' 7 ' 8' 8+' 24" +' @" 43' +J25 '
2' 9+2D +!' 1+ 24 6' !"B' 9+' 8B244' 5" !6'
859""4' ' 2D"!' " ' 9+' 42!.+' 5 6' 859""4' 3 +' "'
9+' 4" .+!' +!B' 2 3' 9+' 42!.+!' B7+!' " '
59 43!+ ' 2 .9 '76' " +' +259+!' ' 9+'5 +8' 92 '
3"+8' 9+' 859""4' 5+ 8 8' 728 8' "@' ' 8+' " BC
7 +3' @ 9' 8"B+' 728 8' @9 59' !8 ' !+5". I+3'
9+' ' " ' 5"8 ' " ' B2 + 2 5+' @9 59' 8' 9+'
+259+!' "!' !"" B' B2 2 +3 ' ' 8' 9+' B"8 '- 8 '
/" ' 244' 728+8 ' ' 8' 8"' 8+3' 76' +@' :+!8+6' '
B2A .' 9+' 5" 6' 211"! " B+
>' + % ' - "? 9 8' 728 8' 8' 8+3' '12! '
28' 2' 728 8' " ' 211"! " B+ ' 76' 2' +@' +8 +! '
8 2 +8' ' 8' 2 ' 3 !+5 ' 2 +B1 ' "' !+5". I+'
9+' ' " ' 5"8 ' " ' B2 2 .' 2' 859""4' 2 3'
9+' +259+!' @9"' B 8 '7+' +B14"6+3 ' ' B2A .'
211"! " B+ ' 2' 3+ +' 8 B' "!' 1!"1"! " ' 8'
!8 '8+ '28 3+' 2 3' . D+ ' "' +259' 3 8 ! 5 '@ 9" '
!+.2!3' "' 8 !+' ' 8' 248"' 2 '2 +B1 ' "' +R 24 I+'
9+' 211"! " B+ 8' 28' 7+ @++ '! !24' 2 3' "@ '
"!' 5 6' 859""48' 9+' 3 8 ! 5 ' R " 2' 7+ .' 9+'
82B+' "!' +259 ' "B7 +3' @ 9' 8"B+' " 9+!'
728 8' ' 52 ' 7+' 2!!2 .+3' 8"' 28' "' 1!"3 5+' .""3'
!+8 4 8 ' 7 ' 8+3' 24" +' ' @" 43' 7+' B1!25 524'
2 3' - 8 ' +J5+1 ' ' 2' 8 2 +' @9+!+' 244' 9+' 3 8C
! 5 8' +B14"6+3' 27" ' 9+' 82B+' B7+!' " '
+259+!8 ' ' @9 59' 528+' ' @" 43' 211!"J B2 +'
9+' +J ' 728 8' " ' 211"! " B+
<' 0 ' 0 % ' - "' ?' 9 8' 8'
8+3' 28' 2' 12! 24' 728 8' "!' 9+' 211"! " B+ ' " '
38' 76' +@' "!A' +@' :+!8+6' + 864D2 2

2 3 (+! B " +42@2!+ 24" + 8+ 28 2 8 .4+ 728 8 52 7+ 89"@ 76 5245 42 " 92 B 2 6 !+81+5 8 9+ B "8 - 8 8 .4+ 728 8 92 5" 43 7+ 8+3 9+ B " +6 5"44+5 +3 !" B 244 " 9+ 728 8 " @+24 9 @" 43 7+ 3 8 ! 7 +3 "! 9+ 7+ + 244 " 9+ 728 8 " 9+ B7+! " +259+!8 ++3+3 " +259 9+ 59 43!+ "! @9" B 9+ 2J+8 @+!+ 5"44+5 +3 9+ 42!.+! 5" B B +8 @9+!+ 42!.+! 8242! +8 2!+ 12 3 2 3 B"!+ 59 43!+ 2!+ 2 .9 3+! + +259+! @" 43 92D+ B"!+ 12!+ 8 2 3 B"!+ @+24 9 " 1!"D 3+ 2 6 +J !2 8 B ++3+3 9+ 728 8 9"@+D+! 2 48 " 1425+ 2 6 1!+B B " B2 6 3+8 !274+ +3 52 " 24 + "! 8 " 9+ 12! " 2 5" B B 6 2 3 9 8 4 +8 8 59 + 3+ +5 "B7 +3 @ 9 2..!+.2 + 3268 2 + 32 5+ "!B 8 " + 9+ B"8 - 8 2 3 " + 9+ 7+8 5" B 7 +3 728+8 " 211"! " B+ 92 52 7+ 3+D 8+3 "B 7 +3 28+8 " 11"! " B+ ? 5" B 7 2 " " @ "!" B"!+ 728+8 8 8+3 76 2 B7+!" 8 2 +8 "!3+! " 8+5 !+ 2 B"!+ +R 274+ !+8 4 9+ 3 8 ! 7 " " " 859""4 B" +6 + 864D2 2 "! +J2B 14+ 3 8 ! 7 +8 9+ 8 2 + 211!"1! 2 " " " 9+ 728+8 " +259+!8 +B 14"6+3 859""4 5+ 8 8 2 3 1!"1+! 6 D24 2 " " + 9 !3 " +259 +@ :+!8+6 B2A . 9+ 5" 6 211"! " B+ . D+8 dQ## "! +259 +259+! +B 14"6+3 2 3 9+ !+B2 3+! 8 211"! " +3 " 9+ 728 8 " 2..!+.2 + 3268 2 + 32 5+ +7!28A2 " + " ! 9 " 9+ 5" 6 211"! " B+ 8 . D+ " 9+ 859""4 3 8 ! 5 8 +R 2446 2 3 @ 9" !+.2!3 " 8 I+ 2 3 9+!+B2 3+!" 9+ 728 8 " 859""4 5+ 8 8 2 3 24 "! 2 B2A . 9+ 5" 6 211"! " B+ . D+8 dPP# " +259 859""4 "! +259 +259+! 5" . 0# 5+ 8 8 59 43!+ 28 2 +259+! 2 3 9+ !+B2 3+! " 9+ 728 8 " 2D+!2.+ 32 46 2 + 32 5+ (2! " 8 5" B 7 2 " 728+8 52 7+ 3+D 8+3 @9 59 52!+ 446 5245 42 +3 " @ . D+ 2 !46 +R 274+ !+ ! 8 7 9+ 7+8 728 8 !" B 2 +3 52 " 24 1" " D +@ 8 2 5" B 7 2 " " +259+!8 25 2446 +B 14"6+3 9 2D+!2.+ "!2..!+.2 + 3268 2 + 3 2 5+ ".+ 9+! @ 9 2 8B 244 !+8+!D+ 3 28 @ 44 7+ 3+85! 7+3 42 +! 9+ 4+ . 9 " +!B D2! +8 .!+2 46 9!" .9" 9+ 8 2 + 9+ 2D+!2.+ 32 46 2 + 32 5+ 8 9+ 7+ +! 28 +R 24 I+8 244 859""48 28 " +! B8 2 3 3"+8 " @"!A - 8 5+ " 9+ ! !24 859""48F 7 9+ +! B 8 27" 9+ 82B+ 9!" .9" 9+ 8 2 + 28 " +5 5 @9+!+ 244 859""48 2!+ !+R !+3 " 1!"D 3+ 2 + B" 98 859""4 9+ 2..!+ .2 + 3268 2 + 32 5+ 8 9+ 7+ +! 28 1425+8 2 1!+B B " B"!+ 3+8 !274+ + "! 8 " 9+ 12! " " 9+ 5" B B 6 "! 2 3 ++3 28+8 ? 2 2 +@ 8 2 +8 2 2 +B1 928 7++ B23+ " 211"! " 2 4+28 2 12! " 9+ 3 "! 2J+8 @ 9 B"!+ 3 !+5 ! +!+ 5+ " 9+ + "! 8 B23+ 76 5" B B +8 " 1!"D 3+ .""3 859""48 "! 9+B 8+4D+8 2 3 248 @ 9 !+ +!+ 5+ " 9+ !+42 D+ ++38 " 5" B B +8 9+ 8+ . 212! " 2 !+8+!D+ 3 " ! "B P 1+! 5+ " $# 1+! 5+ " 7+ 8+3 2 +! 9+ !+. 42! 211"! " B+ 928 7++ B23+ " !+ 3+! 233 " 24 288 8 2 5+ " 9"8+ 5" B B +8 @9 59 92D+ B23+ 2 B2J B B" + "! 2 3 2!+ 8 44 ++3 " 233 " 24 288 8 2 5+ " + 274+ 9+B " B2 2 2 859""4 9+ 4+ . 9 " B+ !+R !+3 76 42@ 8 9+ 8 B14+8 "! B " 8 59 2 3 9+ !+. 42! 211"! " B+ 728 8 5" +8 " 7+ 8+3 2 3 9+ !+8+!D+ 3 8 8+3 " 46 " !+ 3+! 233 " 24 288 8 2 5+ " 9"8+ 5" B B +8 @9"8+ 1+5 4 2! 5 !5 B 8 2 5+8 @2!!2 +J !2 2 3 9+ 2 + "2!3 " 3 52 " 8 2446 3 8 ! 7 +8 9+ !+8+!D+ 3 2 3 " 46 2 +! D+8 .2 " 3 2 2!8 P Q 1+! 5+ !+8+!D+ 3 8 2 +J2B 14+ " 9 8 "!B " +J !2 2 3 (+! B " 2 3 +@ 2B 189 !+ . D+ 8" B+@92 8 B 42! 288 8 2 5+ " 9"8+ "@ 8 @9"8+ 2J "!859""48 928 +J5++3+3 2 5+! 2 !2 + 2882 59 8+ 8 8+8 9+ + !+ 5" B+ !" B 8 859""4 3 " 9+41 1""! ! 1 3 8 ! 7 . 9+ 3 " 46 " 9"8+ "@ 8 92D . 2 " 24 D24 2 " " 2J274+ 1!"1+! 6 " 4+88 92 dQ P## ### 2 3 92D . 2 .!23+3 859+3 4+ 728+3 " ""D24 2 " 2 3 9+ 1!"1"! " " 9+ 24 "@ 2J 3+C D" +3 " 859""48 9"8+ 92D . 9+ 4"@+8 D24 2C " 2 3 3+D" . 9+ 42!.+8 1!"1"! " " 9+ ! 2J+8 " 859""48 !+5+ D . 9+ 42!.+8 2B" 8 9+ 1! 5 14+ D"4D+3 9+ 8+ . 28 3+" 2 !+8+!D+ 3 "! 9+ 2 3 " +5+88 " 5" B B +8 8 " + 92 " .9 " 8+5 !+ "! 2 @ 3+ 23"1 " 2 3 8+ 4 +88 +! 9+ 7+8 "!B 211"! " B+ 142 92 52 7+ 3+D 8+3 928 7++ 1 " 8+ 9+!+ @ 44 8 44 7+ 2 +@ 1""! 5" B B +8 @9 59 52 " B++ 9+ 3+B2 38 " 9+ 8 2 + 9" .9 9+6 !2 8+ 9+ 9 .9+8 2B" " " 2J 244"@+3 76 42@ " +5 5 2 8 44 ! 9+!+J + 8 " " " 9+ 1! 5 14+ " 9+ +R 24 I) " " " "11"! +8 2 3 23D2 2.+8 928 7++ B23+ 76 2 42@ @9 59 D ! 2446 +R 24 I+8 9+ 23D2 2.+8 " V +3 52 " " +D+!6 59 43 9+ 8 2 + 1 dQP ## 1+! 6+2! " 2 728 8 " 2D+!2.+ 32 46 2 + 32 5+ 2 3 2 9+ 82B+ B+ +R 24 I+8 9+ 7 !3+ " 8 11"! " +D+!6 2J126+! 3"@ 2 2J " " ! B 448 " 9+ 3"442! / '% ? B"8 8 2 +8 " 3 8 5 " 8 B23+ 9+ 211"! " B+ " 38 7+ @++ +4+B+ 2!6 859""48 2 3 9 .9 859""48 9+ B " +6 . " 2 5" B B " 859""4 3 2 3 2 6 7242 5+ ++3+3 7+ . !2 8+3 76 +J !2 4"524 2J2 " 2 +@ " 9+! 8 2 +8 24 "! 2 7+ . 2 +J2B 14+ 244 38 "! 9+ @" 54288+8 " 859""48 2!+ 52!+ 446 8+.!+.2 +3 2 3 +J !2 2 3 "! 9 .9 859""48 8 211"! " +3 2 2 3 +!+ B+ 2 3 2 3 C +!+ B2 +! !"B 92 "!+4+B+ 2!6 859""48 2 B7+!" " 9+! 8 2 +8 @9+!+ 9 8 8+.!+.2C " " 38 8 " B23+ 8"B+ "!B " +J !2 2 3 8 .!2 +3 "! 9+ B2 + 2 5+ " 9 .9 859""48 "! 2 5" 8 3+!2 " " 9 8 8++ 0+ &" 0 * !"1+ ? 9+ 211"! " B+ " 859""4 8 1C 1"! !"1+2 5" ! +8 8 2! B"!+ 5" BC 14 52 +3 92 9+ +3 2 +8 2 3 !+C R + 46 D"4D+8 !23 " 8 2 3 D+8 +3 +!+8 8 92 2!+ 92!3 " 3 8+ 2 .4+ .+ +!24

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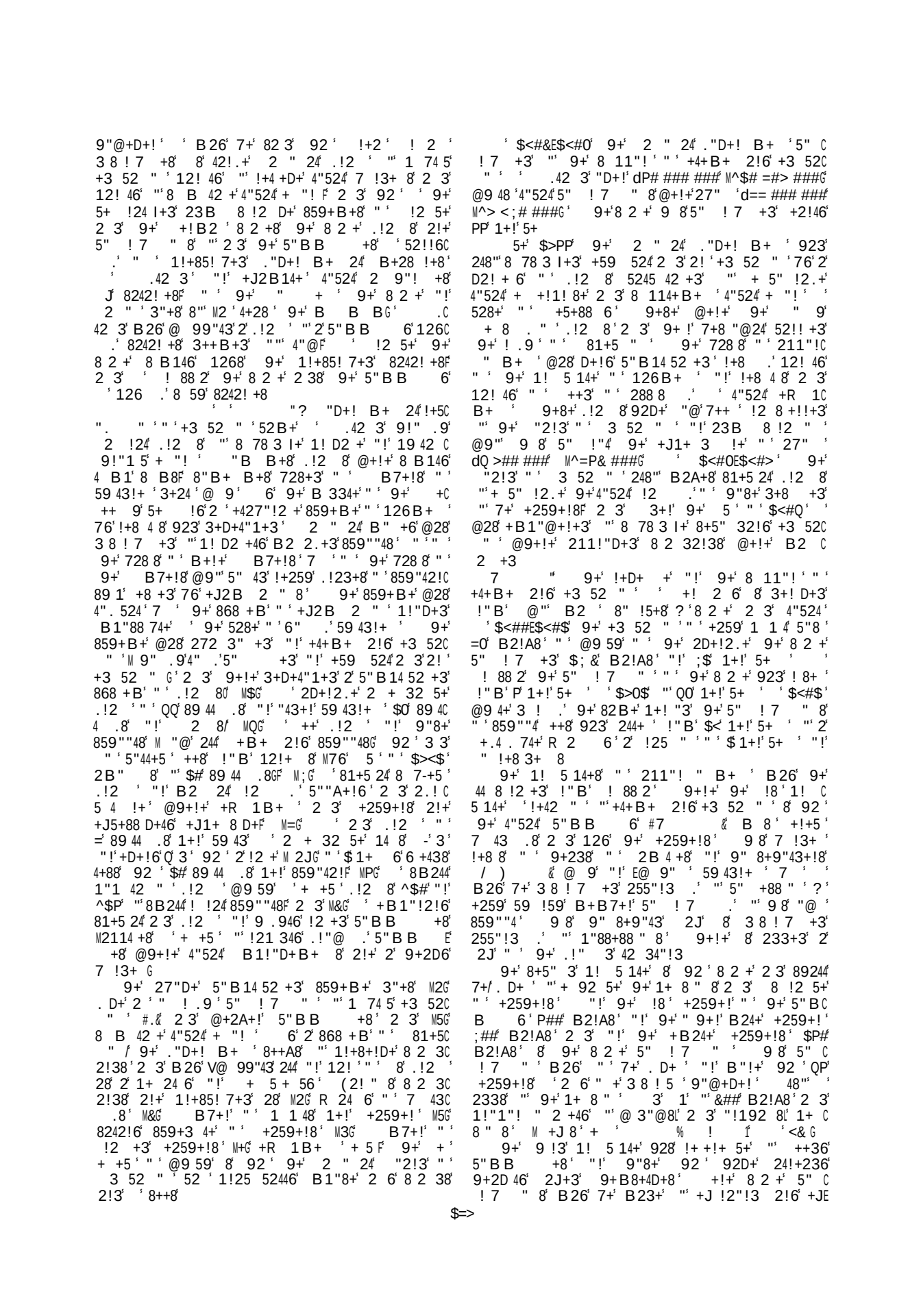

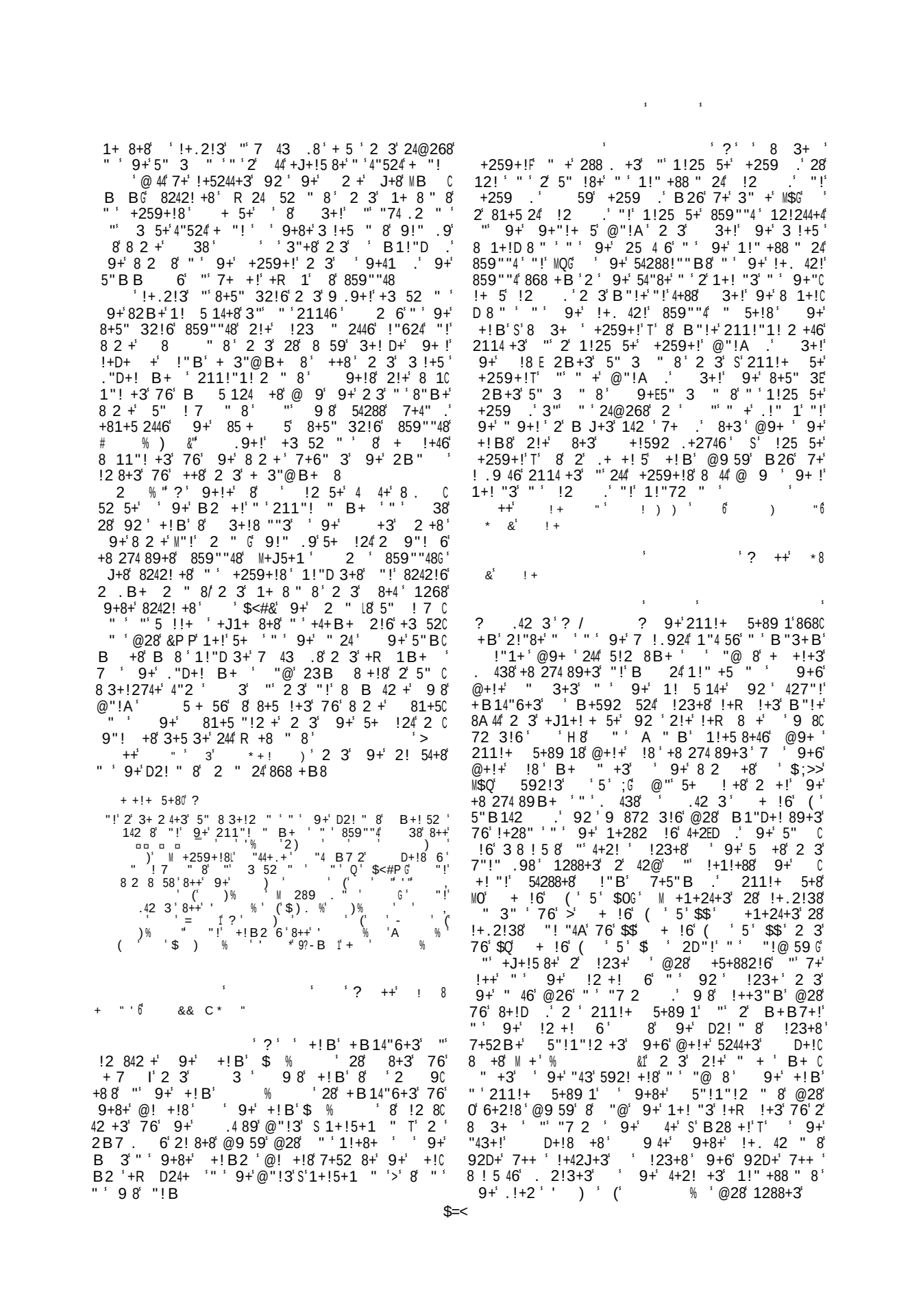

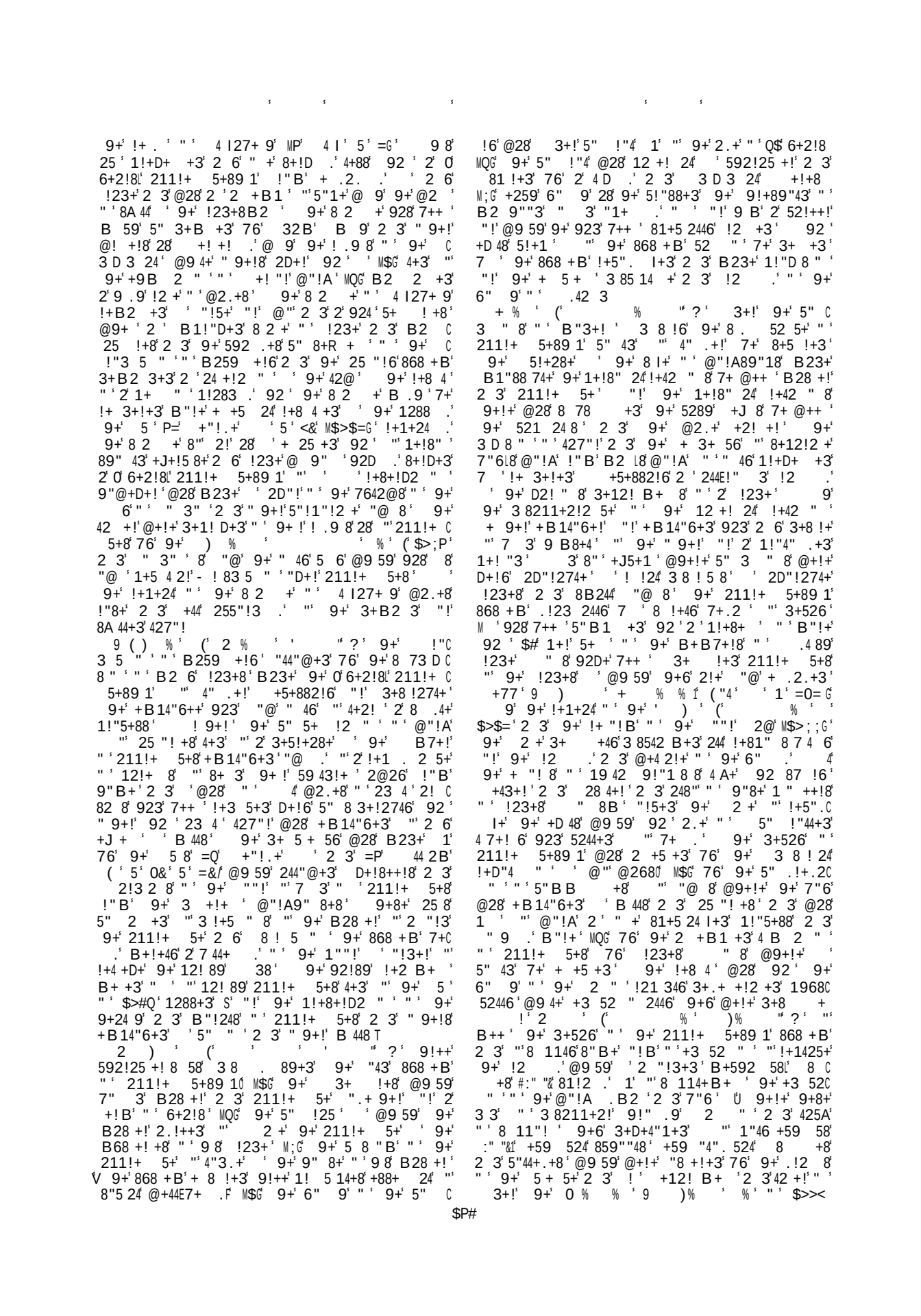

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+8 " 211!+ 5+89 1 !2 . 8 7+ . +4
B"!+ 2 3 B"!+ 92 3 8 ! 24 + 5 + 56 52
7+ 1!"B" +3 " 46 76 92D . " " 46 8A 44+3
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+B14"6B+ !+. 8 !6 5"B B ++8 92 2!+
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@" 43 " +! +!+ @ 9 9+ !+. 42!868 +B "
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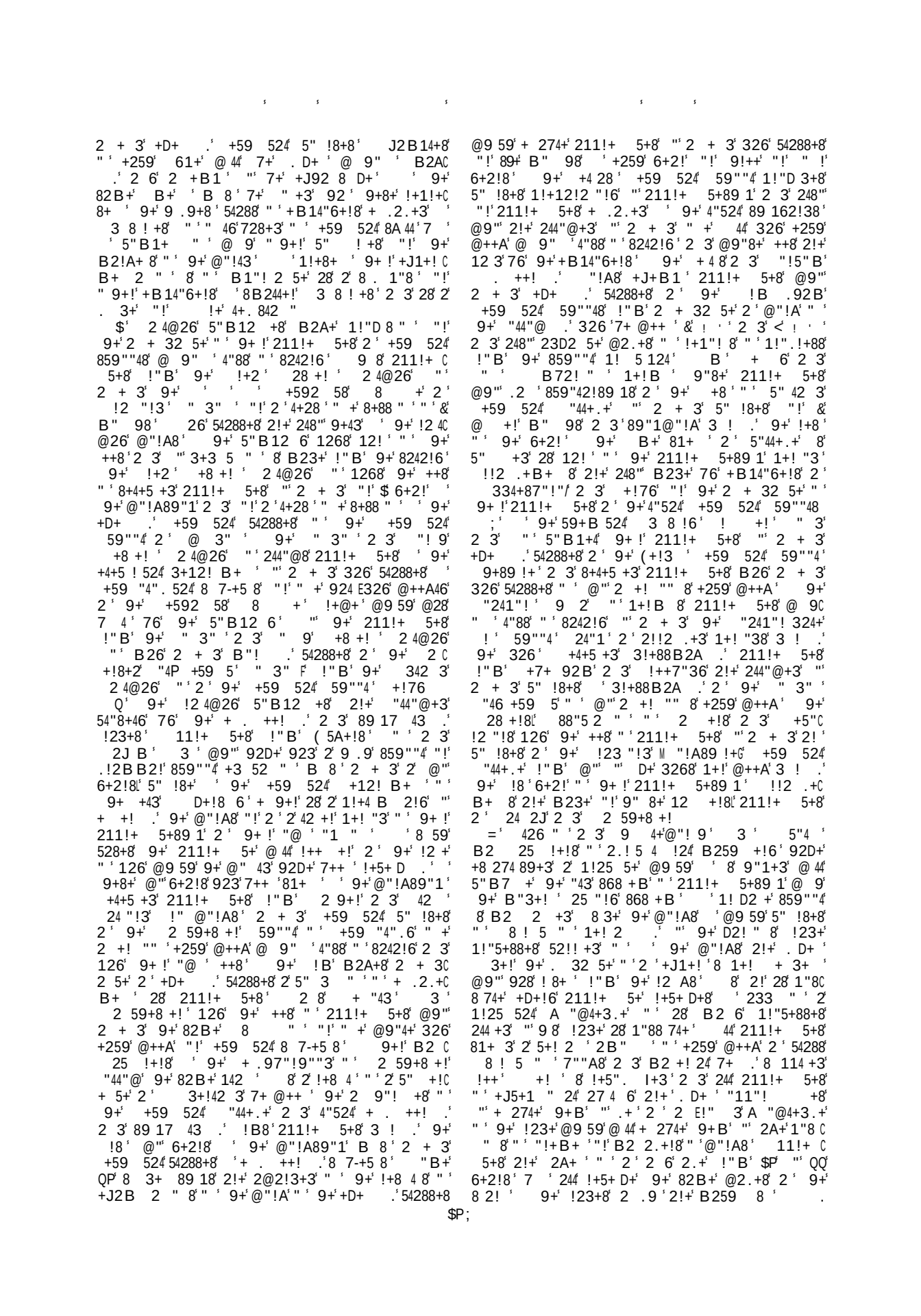
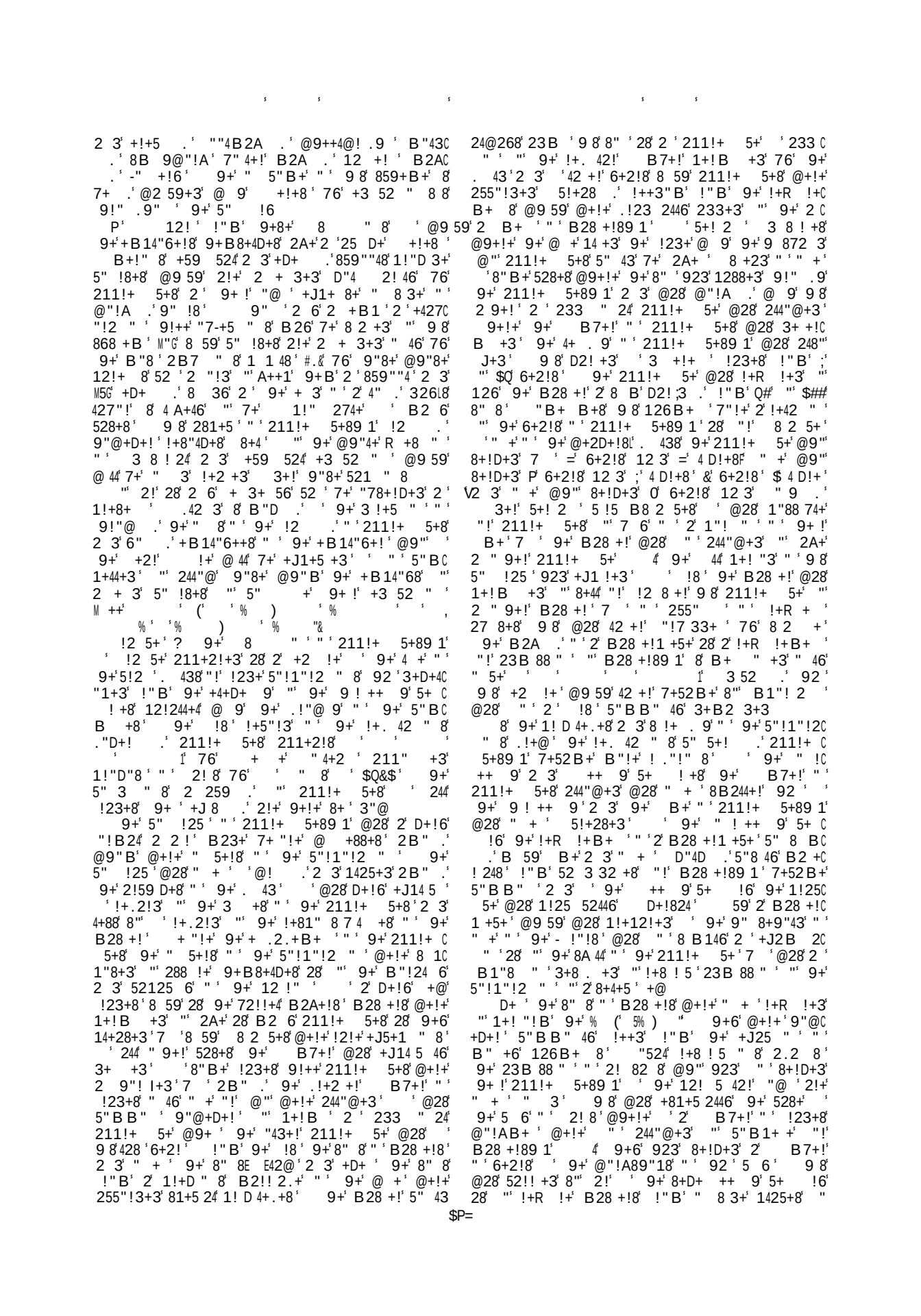
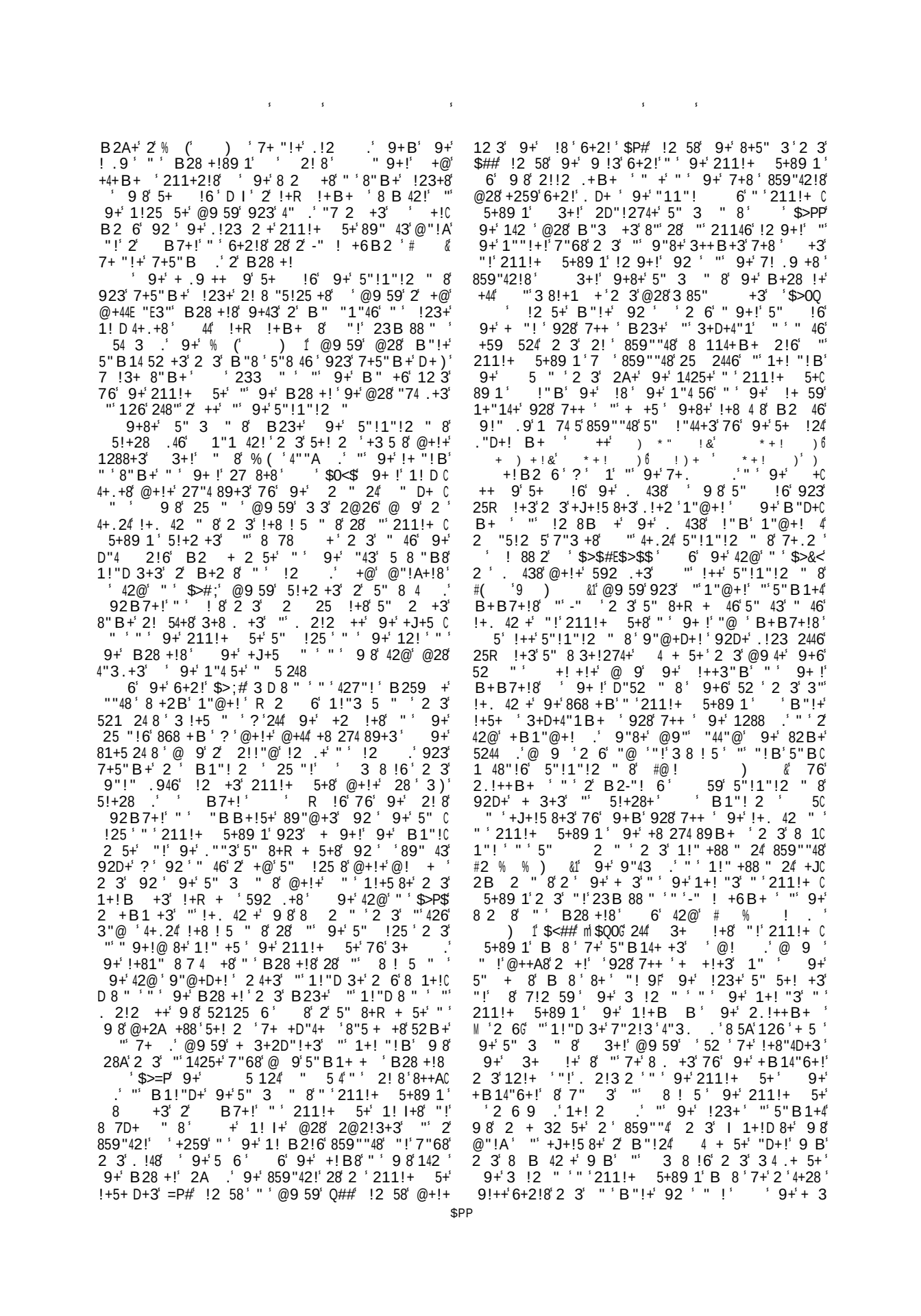
B+ 8 "@9 59 9+6 2!+ 2 !25 +3 76 9+ !+42 D+
9 .9 @2.+8 " 9+ +2!46 8 2.+8 9+8+ 5"BC
B ++8 @"!A 5" +5 " @ 9 9+ +B14"6++8

244' " '@9"B' 2!+' 5 !5 42! I+3' "!' "!B2 " ' 2 3' " ' 9+' " 9+!' 92 3' 9!" .9' 9+' 859""4' +259+!8' 9+ ' 9+' B+' 211!"259+8' "!' 2' 7"6' "' 4+2D+' 859""4' 9 8' 12!+ 8' .+ ' 2' 4+ +!' !"B' 9+' 9+23C B28 +!' 28A .' 9+B' "' B++ ' 9 B' 2 3' 3 85 88' 9+' 423L8' !+' ' D+!6' B2 6' 528+8' 9+' +259+!' 928' 2' 7+ +!' 3+2' 28' "' @9+!+' 9+' 7"6L8' 81+5 24' 27 4 +8' 4 +' 92 ' 92D+' 9 8' 12!+ 8' 9+' 54288' +259+!' 8' 1!+8+ ' 2 ' 9+' 3 85 88 " ' 2 3' ' 92D .' 7++ ' 8+ 4+3' @92 ' 5244 .' 8' B"8 ' 4 A+46' "' 8 ' 9+' 7"6 ' 2' 52!3' 8' 44+3' 1' 1D .' 12! 5 42!8' 27" ' 9 B ' 2 3' ' 9+' 2 9"! +8' "!' 9+' 859""4' 8+4 ' A "@' " ' "' 8 2 " ' "1+ ' 92 ' @ 44' 8 ' 9+' 52!3' 8' 8+ ' "' 9+' + !24' 3 52 " ' 5+' @9+!+ ' " ' 5" !8+' 2' 5"B14+ +' !+. 8 +!' 8' A+1 ') " ?' 9' 5!+28+3' 25 4 +8' "!' +3 52 " ' 9+' ++38' " ' 3 8 ! 24' @"!A+!8' 92D+' 5!+2 +3' 2' @ 3+81!+23 .' +!+8 0' M$G' B" .' +B14"6+!8' " ' 427"!' @9"' +J1+5 ' +59 524' !2 C .' "' 1!"D 3+' 9+B' 4 B2 +46' @ 9' @"!AB+ ' 1"88+88 .' 2 ' 3 8 ! 24' +44 .+ 5+' 2 ' 1!+8+ ' 425A .' ' 9+' 2D+!2.+' 2! 82 ' "E326 ' "@ .' "' 9+' 1288 .' 2@26' " ' 9+' "43' 868 +B' " ' 211!+ C 5+89 1 ' MQG' B" .' 9+' !2 A' 2 3' 4+' " ' @"!A+!8 ' @9"' 8++' ' ' 2' B+2 8' " ' +8521+' !"B' 9+' B" " " " 8' !" +' @9 59' 81+5 24 I+3' 3 8 !6' B1"8+8' 1" ' 9+' @"!A+!' "E326 M;G' B" .' 8"5 "4". 8 8 ' @9"' 8++' ' 8' 23"1 " ' 2' B+2 8' " ' 8+5 ! .' 3 8 ! 24' + 5 + 56' 4+23C .' "' 2' 9 .9+!' 8 2 32!3' " ' 4 +' "!' 9+' @"!A+! M=G' B" .' +3 52 " 8 8 ' @9"' ++4' 92 ' 9+' 1!+8+ ' 61+' " ' 859""4' 3"+8' " ' B++ ' @ 9' 9+' ++38' " ' 2' .!+2 ' B288' " ' 9+' 2 +L8' 59 43!+ Ú % ' "' ?' 9+!+' 8 44' 8 !C D D+' ' 9+' 2 +' ""A' 8+D+!24' !+. 42 " 8' !+42 .' "' 211!+ 5+8 ' 9 8' 76' 9+' 8 2 +' " ' $P;&' MQ>' + !6' (G' 5"B12 +8' 52 " ' !+8 !2 ' 9+ !' 211!+ 5+8' !"B' +8 274 89 .' 89"18' @9+ ' 9+6' 7+5"B+' !++' 6' $>' +"!.+' ' 5 ' =0' M$000G' "' 59 43' 211!+ 5+3' 52 ' 5" C +' 28' 8 59' 2 +!' 9+' 2.+' " ' Q$' ' $>$=' MP=' +"!.+' ' 5 ' =G ' 8"' 2!' 28' ' + 25 +3' 92 ' "' 1+!8" ' 89" 43' +J+!5 8+' 2 6' !23+' @ 9" ' 92D .' 8+!D+3' 0' 6+2!8L' 211!+ 5+89 1' "' ' @28' !+1+24+3' +JC 5+1 ' "!' 5 8 "B8' ' !+81+5 ' "!' " 3" ' 9+!' 4+. 842 " ' !+. 42 +8' 9+' 211!+ 5 .' 76' "D+!C 8++!8' " ' 12! 89+8' 9+' 7+ +!' 1!" +5 " ' " ' 211!+ 5+8' 2 3' 9+ !' 8 1+!D 8 " ' 76' "D+!8++!8' 2 3' . 2!3 2 8' 8' 1!"D 3+3' "!' 76' $=' 2 3' $P' (5 "! 2 ' 5 ' =G ' 8"' 2!' 28' ' + 25 +3' 92 ' "' 1+!8" ' 89" 43' +J+!5 8+' 2 6' !23+' @ 9" ' 92D .' 8+!D+3' 0' 6+2!8L' 211!+ 5+89 1' "' ' @28' !+1+24+3' +JC 5+1 ' "!' 5 8 "B8' ' !+81+5 ' "!' " 3" ' 9+!' 4+. 842 " ' !+. 42 +8' 9+' 211!+ 5 .' 76' "D+!C 8++!8' " ' 12! 89+8' 9+' 7+ +!' 1!" +5 " ' " ' 211!+ 5+8' 2 3' 9+ !' 8 1+!D 8 " ' 76' "D+!8++!8' 2 3' . 2!3 2 8' 8' 1!"D 3+3' "!' 76' $=' 2 3' $P' (5 "! 2 ' 5 ' $$ M$>P$G ' 3"@B+ 8' "!' 9+' 126B+ ' " ' 211!+ 5+8L' ++8' @+!+' B23+' +3 52C " 24' + 3"@B+ 8' 76' ;Q' 2 3' ; ;' (5 "! 2 ' $>&<' 9+' ' # & % ' % ' M$>><G' 1!"D 3+8' M$G' "!' 211!+ 5+8' " ' " ' 4+88' 92 ' =' 6+2!8' 2 3' " ' B"!+' 92 ' >' 6+2!8 ' MQG' "' "B ' 9+' 5"D+ 2 ' 7 3 .' 9+' 211!+ 5+' " ' "' B2!!6' 3 ! .' 9+' 1+! "3' " ' 211!+ 5+89 1' M;G' "' "B ' 9+' 5"D+ 2 ' " ' 9+' 12!' " ' 9+' B28 +!' "' 1!"D 3+' B+2 ' 3! A' 2112!+4' 4"3.C .' 2 3' " 9+!' +5+882! +8' "!' 211!+ 5+8' 2 3' 8 78 +8' 126B+ ' ' @2.+8' "' 7+' B 2446' 2.!++3' 1" 9+' "44"@ .' 42@8' 2 ' 1!+8+ ' !+. 42 +' 211!+ 5+89 10' ?

M$G' 9+' 211!+ 5+' B 8 ' 7+' 7" 3' " ' 9 8' "@ ' !++' @ 44' "!' @ 9' 9+' 5" 8+ ' " ' 9 8' 12!+ ' "!' . 2!3 2 ' MQG' 9+' 211!+ 5+' 2.!++8' "' 2 446' 8+!D+' 9+' B28 +!' "!' 9 8' !+1!+8+ 2C D+8' "!' 9+' +!B' 81+5 +3' ' 9+' 3+ !+8' "-"' 2 9 4' 8+!D 5+' 54 3+8' @28 +' - !6' "' B28 +!L8' 1!"1+! 6' 42@ 4' 278+ 5+' !"B' @"!A' 3 8"7+3 + 5+' " ' 42@ 4' "!3+!8' B241!25C 5+8' M;G' 9+' 2 9+!' "!' . 2!3 2 ' B 8 ' . 2!C 2 ++' "' 1!"D 3+' 9+' 211!+ 5+' @ 9' 8 5 + ' ""3' 54" 9 .' 4"3. .' 2 3' 244' +5+882! +8' M 4+88' 28' 2.!++B+ ' " 9+!@ 8+' 8' 2!!2 .+3' @ 9' 9+' B28 +!G' M ++' P G' M=G' 9+' B28 +! 2.!++8' "' !+5+ D+' 2 3' 8 ! 5 ' M"!' 52 8+' "' 7+' 8 ! 5 +3G' 23+R 2 +46' 9+' 211!+ 5+' "' 9+' 7+8 ' " ' 9 8' A "@4+3.+' 1"@+!' 2 3' 27 4 6' 9!" .9" ' 9+' +!B' " ' 9 8' 211!+ 5+89 1 MPG' 7+' B28 +!' B 8 ' 1!"D 3+' 9+' 211!+ 5+' @ 9' 23+R 2 +' 7"2!3' 4"3. .' 2 3' B+3 524' 2 + 32 5+' 2 3' !+2 ' 9 B' 28' " +' " ' 9+' 2B 46' M 4+88' 2 ' 2.!++B+ ' " 9+!@ 8+' 8' 2!!2 .+3G' M8++' ;G' "!' 126' 2' 8 B' " ' B" +6' 28' @2.+8' M@++A46' "!' B" 946G' ' 4 + ' 9+!+" ' M&G' 2.+8' B26' 7+' 3+3 5 +3' 76' 9+' B28 +!' M+J5+1 ' ' 528+' " ' 44 +88' "' 7+' 81+5 +3' 76' 2' R 24 +3' B+3 524' 1!25 " +!G' "!' @ 44 4' 3+ 2 4 ' +.4+5 ' "!' 278+ 5+' !"B' 8+!D 5+' " ' 9+' 211!+ 5+' MOG' +28" 274+' +8' B26' 7+' 3+3 5 +3' !"B' @2.+8' "!' 7!+2A .' ! 4+8' M@9 59' B 8 ' 7+' 8+ ' "! 9G' " ' 9+' B28 +!L8' +8 274 89B+ ' M>G' 9+' 9" !8' " ' @"!A' B 8 ' 7+' 81+5 +3 ' 2 3' "D+! B+' B 8 ' 7+' 12 3' "!' 2 ' 2' !2 +' 81+5 +3 ' M<G' 9+' B28 +!' B 8 ' 126' 244' !2D+44 .' +J1+ 8+8' " ' -" ! +68' 5 !!+3' 76' 9+' 211!+ 5+' ' 5" +5 " ' @ 9' 9+' 7 8 +88' " ' 9+' 82 3' B28 +!' 2 3' 8' !+81" C 8 74+' "!' 7"2!3' 2 3' 4"3. .' " ' 9+' 211!+ 5+' @9+ ' 9+' 42 +!' 8' @"!A .' 2 ' 2' 3 8 2 5+' M81+5 C +3G ' M$#G' 9+' 211!+ 5+' B26' 7+' 3 8B 88+3' "!' M"G' .!"88' B 85" 3 5 ' M&G' 34+ +88 ' M5G' C 52125 6' " ' 9+' 211!+ 5+' "' 4+2! ' 9 8' !23+' "' -"' M5G' 2 ' B28 +!L8' 3 85!+ " ' 7 ' 9+' 211!+ C 5+' B26' 211+24' "' - 8 5+8 7 " ?' ' 5" !25 ' " ' 211!+ 5+89 1' 8' " +' @9+!+76' " +' 1+!8" ' 7+5"B+8' 7" 3' "' +259' 2 " 9+!' 2' 5+! 2 ' 1!" +88 " ' "!' !23+' 2 3' 9+' 42 +!' 8' 7" 3' "' 4+2! ' ' 2 3' "' 8+!D+' 28' 2 ' 211!+ 5+' ' 5"B B " ' 42@' S' @! .' T' 8' +5+882!6' ' 9+' 5" !25 ' 7+' "!' B"!+' 92 ' 2' 6+2!' ' "!' 4+88' 92 ' 2' 6+2!' ' "' @! + ' 2.!++C B+ ' 8' +5+882!6 5)% ' (' % " ?' 9!++' 61+8' " ' 25 4 +8' 2!+' 2 "!3+3' "!' 9+' !2 .' " ' 211!+ C 5+8' ' +59 524' 7!2 59+8' ' 9+' !8 ' !2 A' 2!+' "' 7+' " 3' 9+' !+. 42!' +59 524' 859""48' @9 59' 2!+' B"!+' 2 3' B"!+' + 3 .' "' 2321 ' 9+' @9"4+' "!' 12! ' " ' 9+ !' 5" !8+8' "' 9+' ++38' " ' 4"524' 3 8 ! +8' 9+' +B14"6+!8' ' B2 6' 528+8' 5"B1+4' 9+ !' 211!+ 5+8' "' 2 + 3' "!' 12! ' B+' 2 3' ' 8"B+' 8 2 5+8' 126' 9+ !' ++8' 9+' " 9+!' 1!25 5+' 8' "' +8 274 89' 859""48' @ 9 ' 9+' +B14"6+!8L' @"!A8' 3+!' 9+' 592!.+' " ' 2' 8 1+! + 3+ ' @9"' 8' 25R 2 +3' @ 9' 9+' ++38' " ' 9+' +8 274 89B+ ' 9+8+' 859""48' + 3' "' 7+' D+!6' 81+5 24 I+3' ' 9+' 9 !3' 54288' +B14"6+!8' B26' 8 8 ' 92 ' 9+ !' 211!+ 5+8







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9+ 1!"5+88 " 3 .2 3 23"1 .8 78 C +8 "! 9 8 B"! 7 3 868 +B @28 + 9+! !21 3 "!+286 8+2!46 28 $>P# B2 25 !+!8 @+!+ 5"B142 .7 +!46 " 9+ 852!5 6 " 8A 44+3 427"!F 2 3 9+ !21 3 3 8 ! 24 3+D+4"1C B+ "44"@ .9+ D 4 2! B23+ 9 8 R +8C " +D+ B"!+ 25 + 9+ 74 3 +88 " 9+ B2 25 !+!8 " 92 1+! "3 7" 9 " 9+ ++3 2 3 " 9+ 2 !+" 3 8 ! 24 +3 52 " 2 3 9+ +2!" " 9+ @"!A+! 4+8 9+ 427"! B2!A+ 7+ "D+!E8 114 +3 +3 " B2A+ +J1+! B+ 2C " 52 " 8 2 3 3+D+4"1B+ +J !+B+46 84"@ 9 8 @28 12! 5 42!46 ! +28 !+.2!38 9+ .!"@ 9 " 9+ S +@ 211!+ 5+89 1 T F "! " 9 8 1928+ "D"52 " 24 +3 52 " + +!5"B14 52 +3 +4+B+ 8 3 + " !23+ " 8B " 81+5 24 I2C " " 1!"5+88+8 " B"7 4 6 " 427"! 2 3 " 9+ 1+!8" 24 +R 2 " !"B 9+ ! 7+. 9+ " 8 92D+ . 2!3+3 @ 9 B"8 52!+ 4 !+. 42 " 8 9+ 2 !+ 2 3 B7+!" " 211!+ C 5+8F 9+ 9 .9 81+5 24 I2 " " B2 25 !C .! 1!"5+88+8 9+!+ 8 7" 3 " 7+ 5" 4 5 7+ @++ 9+ +B14"6+!@9" @2 8 9+ 5!+28+3 " 1 @9 59 5"B+8 !"B 9"43 .2 +B14"6++ " 2 8 B14+ 1!"5+88 2 3 9+ @"!AB2 @9" 3+C 8 !+8 " .+ 2 +J + 8 D+ !2 .+ " 8A 44F D +@ " 9+ @+44EA "@ + 3+ 56 " B+! 52 @"!A+!8 " B .!2 + 9"1 .! " 7+ +! 9+ ! 5" 3 " 9+ B2 25 !+! 9+8 2 +8 " !2 211!+ 5+8 " 46 " 8++ 9+B +B14"6+3 76 9 8 ! D248F @9 4+ 9+ 25 "!6 868 +B 8+4 B2A+8 +J5++3 .46 3 5 4 " 8+5 !+ " 9+ 211!+ C 5+ ! .9 +259 .! " . 2!3 9 B ! "B 1+ 6 6!2 6 2 9+ 92 38 " 9"8+ @9"8+ 592!.+ 9+ B 8 7+ 1425+3 " " 46 928 9+!+ 7++ 3 8 54 2 " " 9+ 12! " " 9+ 2D+!2.+ "!+C B2 !+2446 " +259 9+ 211!+ 5+ 7 9+ "!B+!L8 8 ! D .! " !+ 4 5 + 56 928 4+3 9 B "!+5" "B 5 !+28" 8 " A++1 9+ 211!+ 5+ 2 2 8 .4+ 1!"5+88 A 44 8 59 2 81+5 24 1!"C 5+88 B"!+"D+! 5"B B2 38 9 .9+! @2.+8 2 3 928 9+!+ "!+ . D+ 9+ 211!+ 5+ 9 B8+4 2 1"@+! 4 5+ D+ " 8 5A " 92 8 .4+ 25 D 6 @ 9" !+.2!3 " 9+ 4 B2 + + +5 1" 9 8 B+ 24 5" 3 " "! 9 8 B2 +! 24 !+
+81 + 9+8+ 3 5 4 +8 9+ 3+B2 3 "! 8A 44 928 7++ 8 " 1!+88 .! 92 B2 6 +8 274 89C B+ 8 +81+5 2446 9+ B259 +E7 43 .! !23+8 92D+ . D+ B 59 8 36 2 3 +J1+! C B+ 2 " " 9+ 1!"74+B 2 3 92D+ +D"4D+3 9+!+ !"B 3 +! . 7 8 2446 + +5 D+ 868 +B8 " 211!+ 5+89 1 9+ + 5"B14+J 6 " "B"3+! 3 8 !6 8+D 3+ 92 " " + B+ 9"3 @44 8 244 528+8 +! 2 3 8 ! +8 92D+ B259 +E + 3 .! "1+!2 " 8 @9 59 D+!6 84 .9 8A 44 2 3 !2 .! 2!+ +5+8C 82!6F " 9+!8 2 +@ +J1+! 3 !+5 "!8 2!+8 C 5 + " 5" !"4 2 42!. + 7"36 " 8A 44+3 427"!F @9 4+ " 9+!8 !+R !+ " " 46 9 .9 +59 524 + 4 5 + 56 7 248" 7+52 8+ " !21 3 +D"4 " 8 24 2321 27 4 6 9+ B2 25 !+ " + . +8 4"5"B" D+8 "! ! 52 + 2 3 3+4 52 + ""48 "! +J2B14+ 3+B2 38 42!. + B7+!8 " 8 59 9 .946 +J1+! @"!A+!8 2!!"44 ! .9 9 8 !+1"! " 9+ % 9) , % 1 +8 B2 . 92 9+!+ 2!+ !" 3 B7+!8 QQP ### B2 25 ! . +8 27C 4 89B+ 8 9+ +3 2 +8 82680 ?

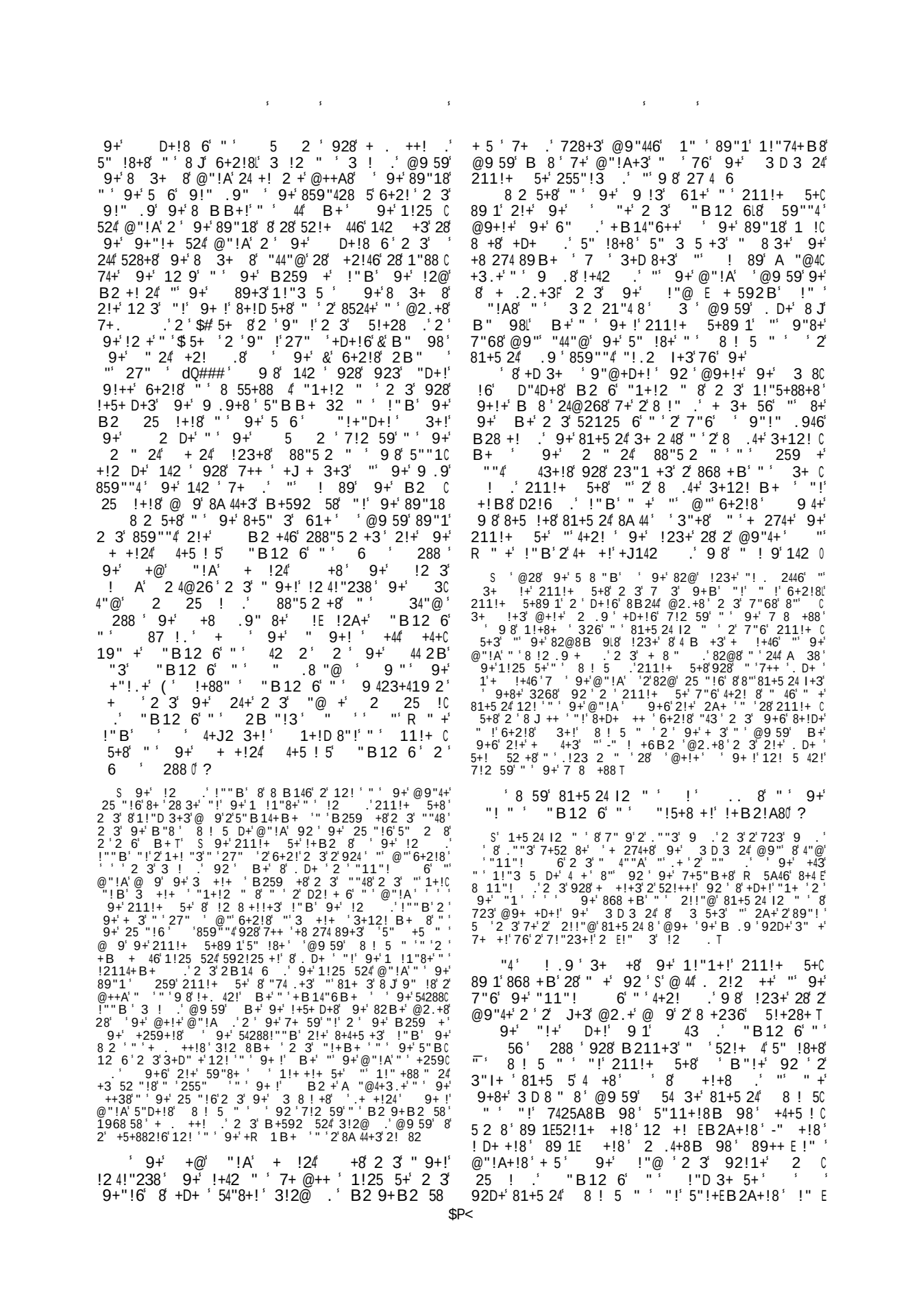
Y 8 B1"88 74+ @ 9" 2A . 2 5+ 8 8 " 9+ @9"4+ B7+!" "285+! 2 9"@ B2 6 92D+ 23"1 +3 2 6 "!B" 211!+ 5+89 1 7 !"B 244 92 52 7+ 4+2! +3 9+!+ B 8 7+ B2 6 B2 6 9" 82 38 T

9+ (! J ;-) (% (PTRS 9+ B7+!" " 211!+ C 5+8 1+!" $### +B14"6++8 " 9 .9E.!23+ 8A 44 8 . D+ 28 = > 9 8 1+!5+ 2. 9"438 "!" 9+ " 9+!" B2 25 ! . 8 2 +8 8 +D 3+ 92 211!+ 5+89 1 8 2 B1"! 2 "!5+ 3 8C !6 "!+"D+! 2 9) 1 74 89+3 $<$# 76 9+ B+! 52 +3+!2 " " 27"! @+ 3 9+8+8 2 +B+ 80 ?

S 8" "B"!+ 92 1288 .+!+8 " +! 92 9+ !+D D24 " 211!+ 5+89 18 76 42!. + 5"!1"!2 +! +!+8 8 9!" .9 5"B1!+9+ 8 D+2 3 82 +!+. 42 " 8 8 .!23 2446 2A ."!B 9 9+ .!"@ .++4 .92 9+ "43E B+ 211!+ 5+89 1 868 +B B 8 7+ B"3 +3 "B++ B"3+! 5" 3 " 8" 4 +9+!+4""B8 1 9+R +8 " 2 8 78 C +@9 59 8924 A++1 9+ 7+8 2 3 B"8 +5+882!6" 9+ "43+!5 8 "B8 2 3 B++ B"3+B !+R !+B+ 8 8 ! 9+!!+5". I+3 92 9+ "43 211!+ 5+89 1 868 +B 1"88+88+3 B2 6 +2 !+8 92 @+!+ +5" "B 5 2 3 C - 8 7 @ 9 9+ 1!+8+!D2 " " B 59 92 @28 .""3 2 3 8 2114 52 " 76 1!"1+!74+ 3 .@ 9 9+ B"3+B 3+2 "1+! +5 " 9+"!6 @" 43 4+23 "B"!+ 82 8C 25 "!6 +8 4 8 B2A+3 + 3+ 56 "@2!38 211!+ 5+C 89 1 8 2A .1425+ 2 3 9+ ++4 .+J1!+88+3 76 7" 9 +B14"6+! 2 3 +B14"6++ 8 92 2 .!23 24 !+ ! @44 2A+ 1425+ 8 59 !2 .8 5" 3 5 +3 82 +46 2 3 23D2 2.+" 846 " 9+ B+! 52 " 9T

9 8 !+D D24 " 211!+ 5+89 1 8 1!"5++3 . !" .946 81+2A . 24" . " ! B2 4 +8 9+ !8 8 @9+!+ 9+ 3 8 ! 24 +8 274 89B+ 2 3 9+ 859""4 868 +B 5""1+!2 + 9+ +3 52 " " 9+ 211!+ 5+ 1!25 5+ 9+ 89"1 7+ . 8 114+B+ +3 2 3 44 B 2 +3 76 5". 2 + 859""4 8 36 " B2 9+B2 58 3!2@ .1968 58 59+B 8 !6 + 5 9+ 8+5 3 8 @9+!+ 9+ +BC 14"6+! 1!"D 3+8 8 59 859""4 +J+!5 8+8 @ 9 9 8 "@ +8 274 89B+ 9+ 9 !3 8 @9+!+ 9+ 3 8 ! 24 +8 274 89B+ !+5"B B+ 38 "! !+R !+8 859""4 8 36 @ 9" B2A .2 6 1!"C D 8 " 3 !+5 "! 9! .9 2 4 2 " "! 8 59 8 114+B+ 2!6 !2 .9 +" ! 9 8 @9+!+ 9+ 211!+ 5+89 1 !2 .8 1!25 52446 5" C 5+ !2 +3 1" 2 8 .4+ 1!"5+88 "! !2 .+ " 1!"5+88+8 "! 9+ 1 !1"8+ " 8+5 ! .81+5 24C !+3 8A 44

9+8+ D2!6 ." !B8 2!+ 7+8 44 8 !2 +3 76 81+5 5 8 2 5+8 9+8+ 2!+ . D+ 9"@+D+! @ 9" 1!+- 3 5+ " 8 B 42! +R 2446 + +5 D+ +J2B14+8 @9 59 "! 425A " 8125+ B 8 7+ "B +3 +!9218 9+ B"8 8 ! A .8 2 5+ " 9+ !8 61+ " 211!+ 5+E !2 .9+ 5""1+!2 D+ 142 +J 8 8 5 2 @9+!+



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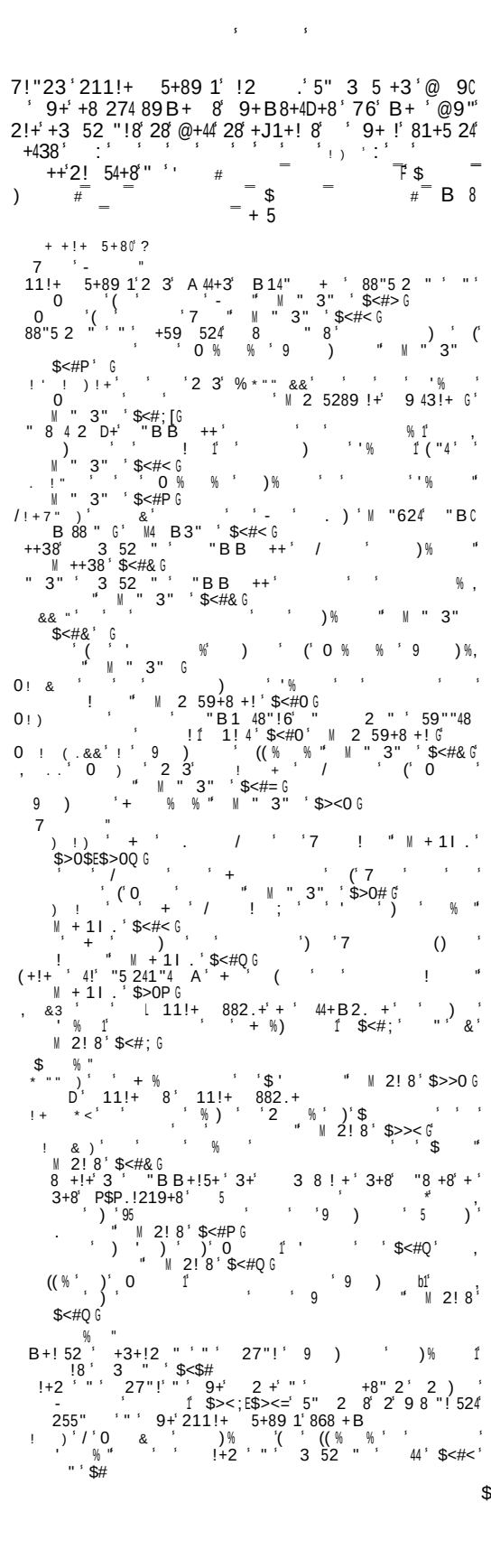

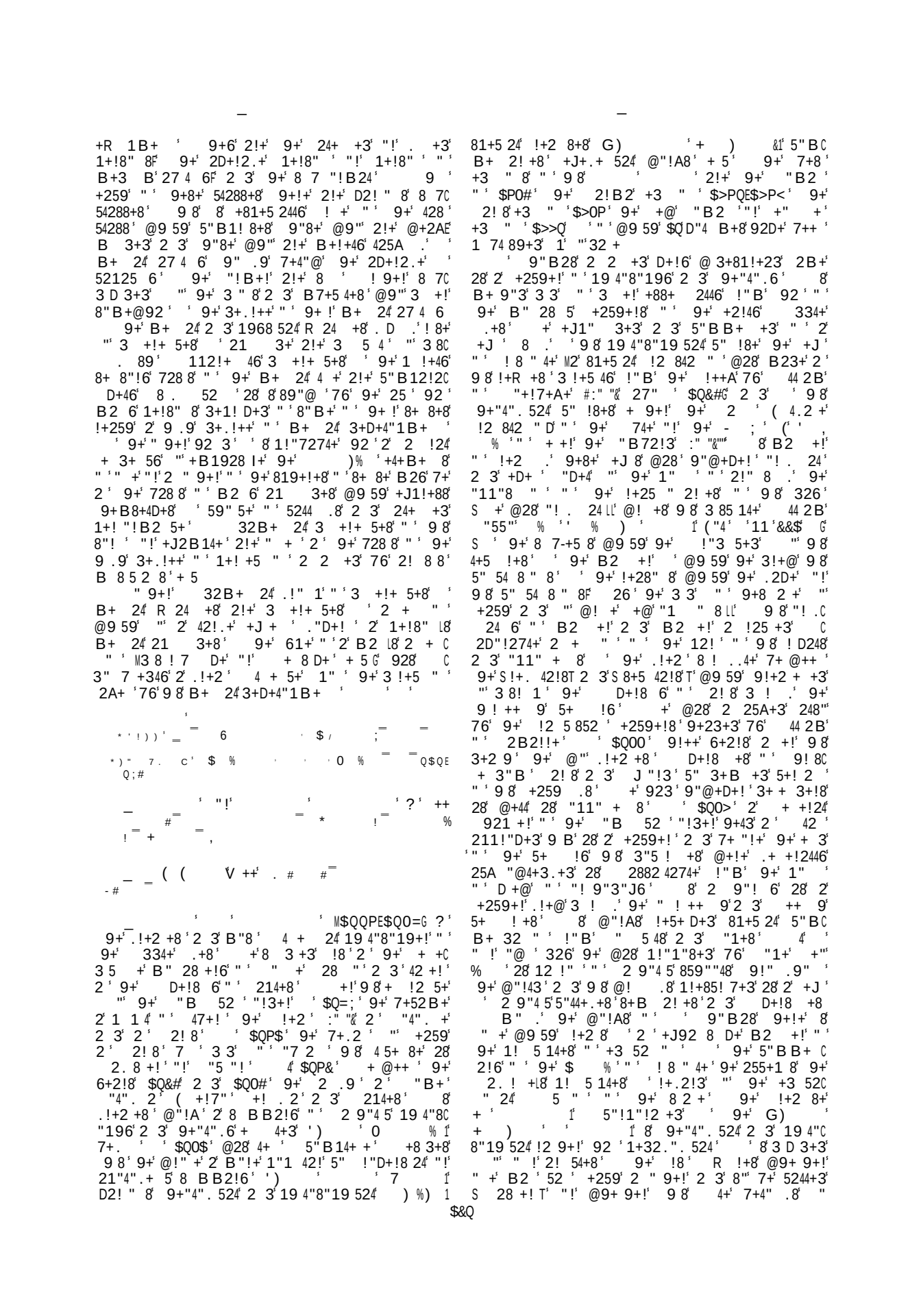

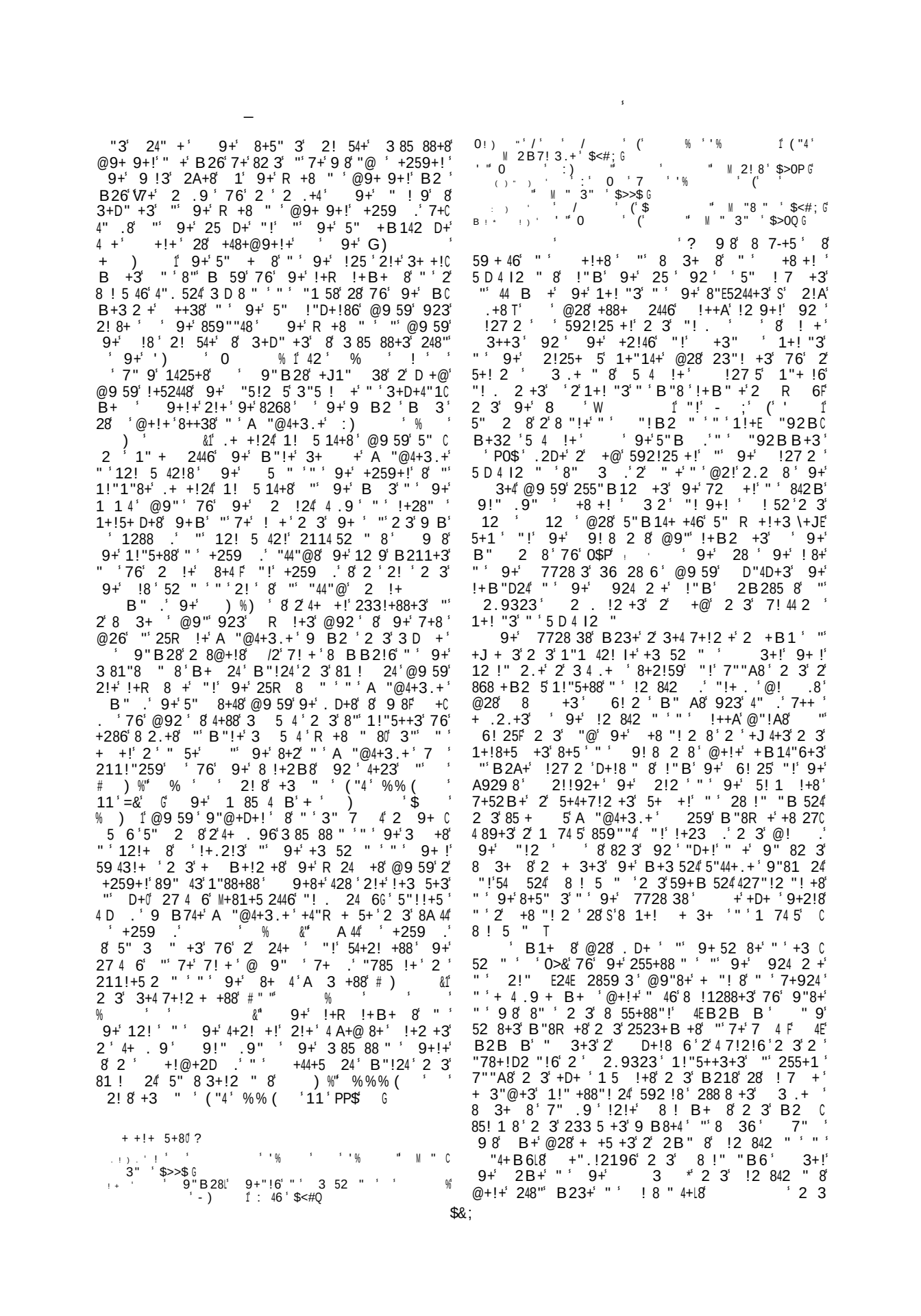

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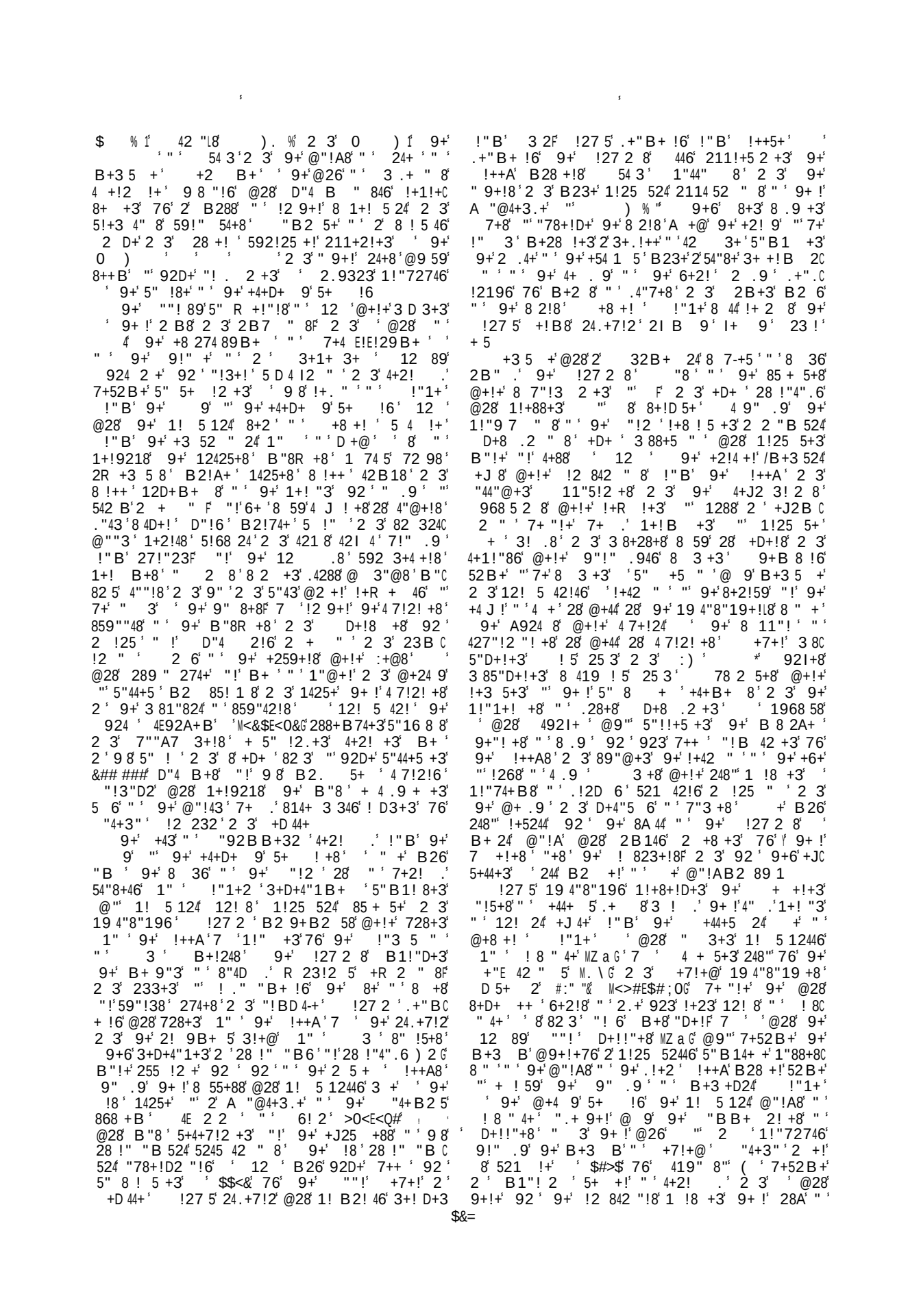

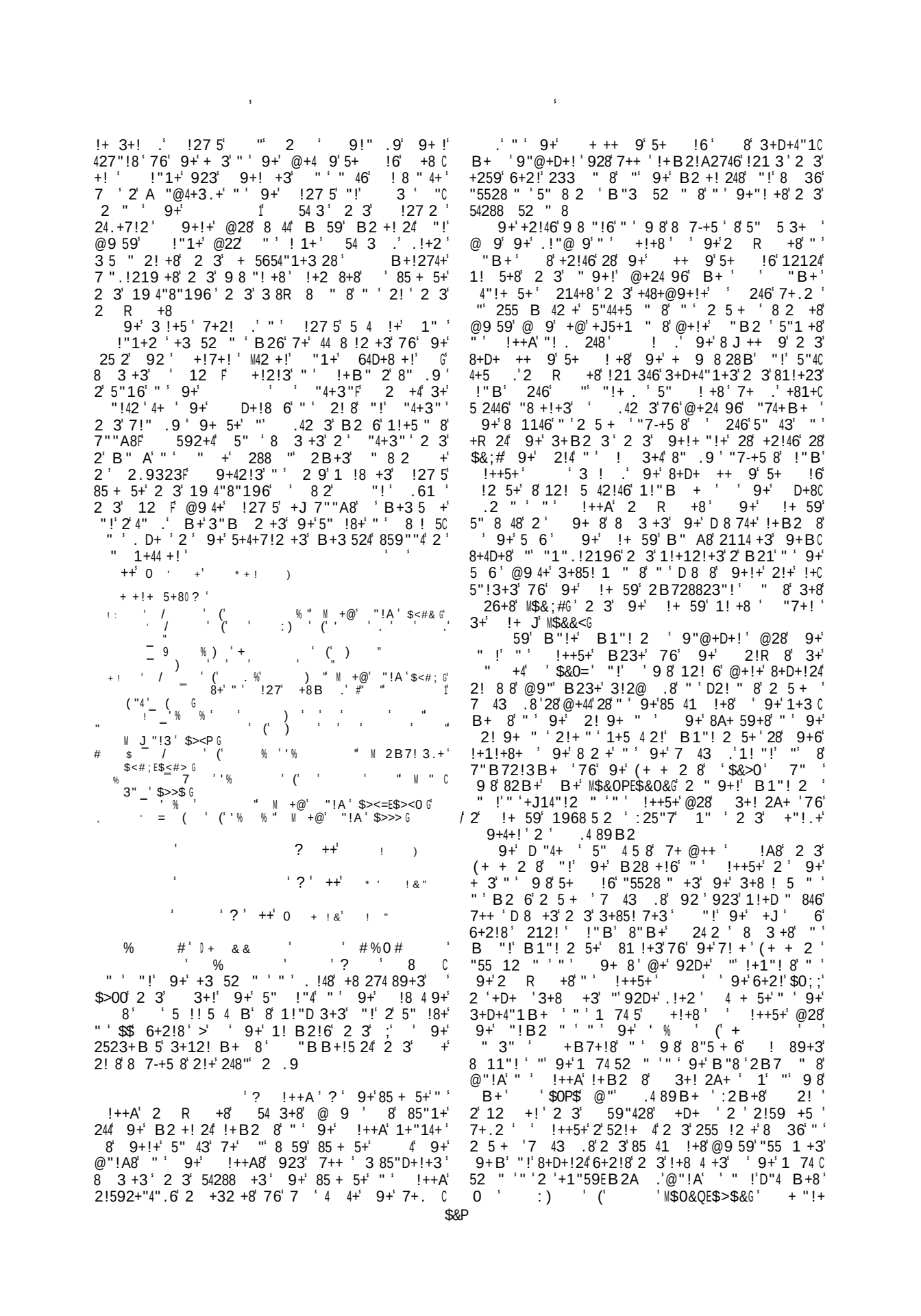

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9+ 8+5" 3 D"4 B+ " 9 8 @"!A 923 211+2!+3 2 +J1+3 " @28 8+ " M$0&=G 76 9+ "5 + 6 " 4+ 2 " B2A+ 2 8 42!+J + 8 D+ 8 36 " 9+ 2 R +8 " " 2 +D+ 28 2!59 C +5 2.2 @ 9 9 8 288"5 2 +8 592!3 92 34+! 2 3 2!8 2 2! 8 1 74 89+3 9+ 3 85"D+! +8 @" D"4 B+8 M$0&< $0<OG 7" 9 8 B+ "" 211+2!+3 M$0&;G 2 .!+2 @"!A 9+ / (% 1 76 2 +!B2 859"42! :"92 :"259 B 5A+4B2 +D+! D 8 +3 !++5+ 2 3 923 1!25 52446 !++A "! . 248 7+ "!+ 9 B "B+ 9 8 D 8 " @28 8" 7!"23 2 3 9 8 8 .9 8" A++ 92 9 8 @"!A @28 "! B2 6 6+2!8 9+ 9 .9+8 2 9"! 6 " !++A 2! 2 3 9+ 8- 8 46 !+.2!3+3 28 9+ 2 9+! !++A 2!592+"4".6 9+ 1"1 42! +!+8 !++A 2 R +8 92 @28 "8 +!+3 .42 3 76 9+ "5 + 6 " 4+ 2 76 9+ 5"44+5 " 8 " "74+B+ 2 3 76 9+ " 32 " " 9+ ! 89 8+ B M$0P<G +!B2 6 76 9+ !+8+2!59+8 " 5A+4B2 2 3 " 9+!8 @28 2!" 8+3 +R 2446 2B" . 9+ !+ 59 76 9+ D 5 "! +8 " 21"4+" @9" 14 C 3+!+3 246 2 3 " 9+! 12! 8 " !"1+ " B2 6 @"!A8 " 2! " "!3+! " "!B " 2! 8 2 8) 21"4+" 3+! 21"4+" " " 9+ !"624 5"4C 4+5 " " 9+ " D!+ @28 "1+ +3 " 9+ 1 74 5 28 9+ 8&+ !2 .2 8 M$0<>G 2 3 (85" 2 3 8 . 89+3 24 2 859"42! @28 1425+3 592!. + " 2 R +8 !2 5+ 21"4+" L8 7"" 6 @9 59 52B+ 42!.+46 !"B 246 @28 2 !2446 "B2 "! 9+ B"8 12! 7 .42 3 9+ B+2 @9 4+ 2 5" 8 2 46 5!+28 . B7+! " !++A 2 R +8 @28 7+ .2 9+!+3 9+ 8+ B 28 @+44 28 1! D2 + 5"44+5 " 8 9+ 9+ 9+ "1+ . 6+2!8 " 9+ + ++ 9 5+ !6 "55 !!+3 2 " 274+ +D+ 9+ 9 8 "!6 " ! 8 7-+5 "!3 4. 9+ ! 89 B728823"! " 8 2 C "14+ !+5+ D+3 1+!B 88 " !"B 9+ "B2 ."D+! B+ " !+B "D+ 8"B+ 85 41 !+8 !"B 9+ 5!"1"4 8 9+ 8 2 5" 5+88 " @9 59 !++46 +!1!+ +3 !+8 4 +3 2 +! 2 6+2!L8 @"!A M$>#QE$>#;G 2 89 1B+ " .42 3 " B2 6 85 41 !+8 59 + 46 !"B 9+ 2! 9+ " 9+ !+5E 9+ B 2 3 9+ +B14+ " 9+ 2 A& 9+ BC B+3 2 + +5 " 9+ !2!! D24 .42 3@28 2 R 2!!+4 28 " 9+ ! 2! 8 5D24 + @9 59 @28 7+C 4 4+3 76 9+ "5 + 6 " 4+ 2 3+! 9+ 4+23+!89 1 " 592!3 26 + .9 8" 92 @28 " 4 2 +!3 8 . 89+3 "!+ . 859"42!8 " 2746 (85" 2 3 2 "D2 923 +J1!+88+3 9+ !23B !2 " " 9+B 92 9+85 41 !+8@+!+ 25R !+3 76 9+ .4 89 ."D+! B+ " !2 5"BC 12!2 D+46 8B244 8 B 2 3 1425+3 9+ ! 89 8+ B M$>$&G @9+!+ 9+ 4. B2!74+8 2!+ 8 44 9+ 59 + 2! 8 5 !+28 !+ " 9+ 1+"14+ 9+ B+2 B+ " 9+! .4 89B+ @+!+ 8++AC .2 3 8 36 .2 R +8 !++5+ B" . 9+B 9"8+ @9" 259 +D+3 B"8 B1"! 2 !+C 8 4 @+!+ 9+ 2!59 +5 8 "5A+!+44 2 3 "8 +! @9" " .+ 9+! @ 9 @" +!B2 8 244+! D" 244+!8 + 2 3 5A9 3 85"D+!+3 $>$$ B"8 " 9+ 1+3 B+ 24 85 41 !+8 7+4" . " 9+ +B14+ " 19222 " 9+ 842 3 ") . 2 9+8+ @+!+ 1 !5928+3 2 2 5 " $>$Q 76 !"@ ! 5+ 3@ . 2D2! 2 2 3 @+!+ 1425+3 +D+ 2446 9+ 461 " 9+A 2 59 " 9+! B1"! 2 @"!A 3+! 2A+ 76 B+BC 7+!8 " 9 8 82B+ 12! 6 $>$$ @28 9+ D+8C .2 " 2 3 +J52D2 " " 9+ +B14+ " 1"44" 2 2882 !523 2 @9 59 5" ! 7 +3 B 59 " 9+ A "@4+3.+ " !++A 2!59 +5 !+ 2 3 !+8 4 +3 9+ 3 85"D+!6 " B2 6 1 +5+8 85 41 !+ B2 46 !"B 9+ ! +!+ @9 59 @+!+ 7" .9 "! 9+ ! 89 8+ B $>$= 7" 9 8 B+ "" D+8 .2 " 8 @+!+ B23+ 76 "5A+!+44 2 3 " 9+! .4 89 2!59 +5 8 " 9+ ! +3 +B14+8 " 5 46 2 !.+ 2 3 +4 E +F @9 4+ $>Q> "! 9+! 246 ! 89+3 2 42!.+ 2B " " +@ B2 +! 24 "! 9+ 8 36 " !++A 2! 9+ 3 85"D+!6 " 8+D+!24 9" C 82 3 12 +3 D28+8 " 9+ +8 2 + " 5 + " 212! + 2 (45 ! ! 2 "44+5 " 8 " 12 +3 D28+8 923 4" . 7++ +J 8 + 5+ 9+ "43+8 52 24". + " 8 59 2 5"44+5 " 7+ . 32 +3 28 +2!46 28 $&<& 2 3 1+!9218 9+ B"8 " 274+@28 92 B23+ 76 ! 44 2B 2B 4 " @9 59 9+ 8"43 " 9+ ! 89 8+ B $0&0 8 B2 6 " 9+8+ D28+8 @+!+ " 3 " B78 ! ! 2 9+6 @+!+ .+ +!2446 !+.2!3+3 28 +JC 2B14+8 " ! 852 2! 24 9" .9 5A+4C B2 " 9 8 / (923 3+542!+3 92 9+6 @+!+ @9"446 !++A 2 D +@ @9 59 3 3 " !+5+ D+ @! 3 255+1 2 5+ 4 8 B 42!+J2B14+8 " 12 +3 1" +!6 923 7++ " 3 D2! " 8 8 +8 " !++5+ 2 3 " :29 $>P= 923 B23+ 2 255 !2 + 2 3 5"B12!2 D+ 8 36 " 244 9+ B2 +! 24 2D2 4274+ 9+ 6+2!8 B B+3 2 +46 1!+5+3 . 2 3 3 ! . 9+ B 4 " 9+ !++A 8 ! ..4+ "! 3+1+ 3+ 5+ M$>Q$E$>;QG " 2!598+"4". 524 8 36 @28 1"88 74+ !++5+ 9" .9 " 9+ 842 3 " +4"8 $>Q# @28 " 3 9+ 8 2 + " 19!"3 + @9 59 @28 25R !+3 76 9+ !+ 59 B728823"! " 8 2 "14+ @9" 1!+8+ +3 " " 9+ " D!+ @9+!+ @28 1425+3 " +J9 7 " $>Q$ 9 9+ 8 55+88 4 +!B 2 " " 9+ !+D"4 " 2 3 9+ +4+5 " " 9+ 2D2! 2 ! 5+ " 9+ 9!" + " !++5+ $>;Q 2 +@ +!2 32@ +3 "! !++A 2!592+"4".6 +!B2 859"42! 3@ . "88 @28 211" +3 " 8+!D2 "!" R +8 3+! @9"8+ 3 !+5 " 9+ 5!"1"4 8 @28 54+2!+3 " 244 7 2 5 + 7 43 .8 9+ +B14+ " 9+ 2 A& @9 59 923 7++ "! 3"@ "! 2 !AC 89 "! 52 " @28 !+8 "!+3 " 8 "! . 24 1"8 " 2 3 B2 6 !2. B+ 8 " 85 41 !+ 2 3 2!59 +5 !+ /@+!+ 52!+ 446 5"44+5 +3 "88 @28 8 55++3+3 28 " 8+!D2 "!" R +8 $>;& 76 2 !++A 2A+8 2 3 9+ .!"@ +!+8 " 9+ !42 3 @28 +D 3+ 5+3 76 9+ "!B2 " 2 !++A 2!598+"4". 524 8"5 + 6 $>QO "!C + . +!8 9"@+D+! 8 44 5" +3 " B2A+ 9+ B"8 B1"! 2 !+8+2!59+8 $>=&E$>=0C 2 .4 89 2!59 +5 + !"8+ B23+ 52!+C 4 2 3 255 !2 + 8 3 +8 " 9+ 2! 9+ " 2 3 !"1642 2 2 3 9 8 3+523+ 9+ +!B2 82D2 8 "88 2 3 4! 598 !2D+4+3 9!" .9

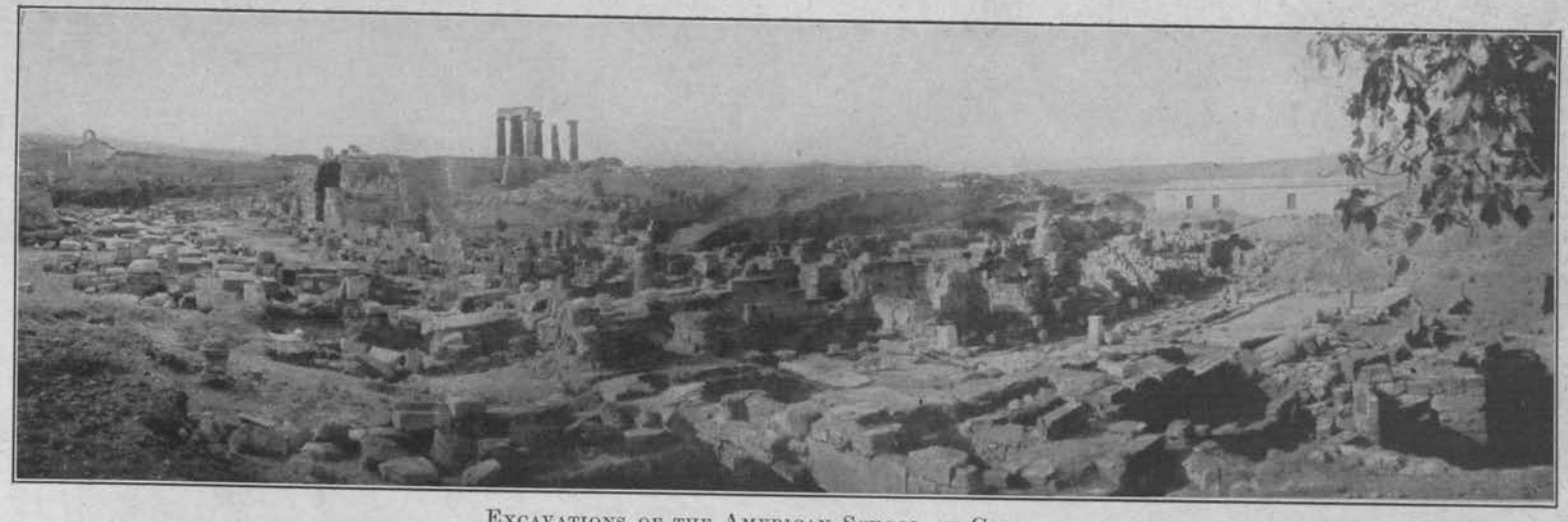
B2 6 12! 8 " 9+ !++A @"!43 B2A . " +8 2 3 "78+!D2 " 8 @9 59 2!+ 8 44 " D24 +
.4 89 +J1+3 " 8 "" 65 2 $>=QE$>==
7!" .9 "" 9+ ! 89 8+ B B2 6 " 9+ 85 41 !+8 " 9+ S 2!16 "B 7T 2 3 9+ S +!+ 3 " B+ T @9 4+ 42 +! +J1+3 " 8 8+5 !+3 "" .42 3 9+ .!+2 +! 12! " 9+ 2 8"4+ B " 24 52! 288 8
$>=& @28 " 3+3 9+ !+ 59 59""4 " !592+"4".6 9+ 8 9 8 5 3+ B2!A+3 2 +1"59 !++A 2!592+"4".6 7+52 8+ 9+ !+ 59 B+ 9"3 @9 59 928 7++ B 2 +3 76 " 9+! 2 " 8 928 7++ "" !2 6" .B+ 76 !+8 3+ 5+ !++5+ 9!" .9@9"B +427"!2 + 2 3 868 +B2 5 +J52D2 " 8 5" 43 7+ 5" 3 5 +3 !"B 9+ 3 85"D+!6 " 9+ + 4& .2 +@26 " 9+ 5!"1"4 8 $>PQ 1 "" 9+ 1!+8+ B+ 9+ !+ 59 59""4 928 7++ + .2.+3 2 8+! +8 " @"!A8 " 9+ !8 B1"! 2 5+ 9+6 92D+ B23+ +J52D2 " 8 2 6! 2 8 2 "! 2 " " 8 "+" 2 2 +.+2 9+ +4"1" +8 8 2 3 9+6 92D+ 5"D+!+3 @"" .!+2 82 5 2! +8 " 1"44"" 2 +4"8 2 3 +419 7" 9 " 9+8+ 8 +8 @"!A 928 7++ 5" 3 5 +3 "! B2 6 6+2!8 2 3 8 " 6+ 5"BC 14+ +3 7" 9 1425+8 74"5A8 " 7 43 .8 92D+ 7++ +2! 9+3 @9 59 6 +43+3 B2 6 C 85! 1 " 8 D28+8 2 3 5" 8 B 59 "!B2 " " 2!59 +5 !+ 2 3 8"B+ B1"! 2 85 41 !+8 " @9 59 9+ B"8 2B" 8 8 9+ 7!" I+ 592! C " ++! " 3 2 +419 $><& 2 3 +J9 7 +3 9+!+ "@ 9+ 4"524 B 8+ B 9+ 9+ 2 7!2 59 " 9+ +!B2 !598+E "4". 524 8 + @28 " 3+3 $>0= 7 9!" .9" 9+ 5+ !6 +!B2 8 923 1426+3 2 B1"! 2 !&$+ 9+ 3+D+4"1B+ " 2!592+C "4".6 2 3 89"! 46 7+ "!+ 92 32 + + ! 59 5 +B2 923 . D+ 2 +@ B1+ 8 "" 9+ 8 36 2 3 "1+ +3 2 +@ +43 "!+8+2!59 76 9+ 3 85"D+!6 M>0G " 9+ B6 9 524 5 6 " !"6 @9+!+ @+!+ " 3 !+28 !+8 " ."43 2 3 .+B8 2 3 +J2B14+8 " 2! 2 3 5!2 @9 59 A "@ 7+ "!+ " 46 76 D2. + !+ +!+ 5+8 2 C 5 + 2 9"!8 @+!+ 8 11"8+3 "" 7+ 5!+2 " 8 " 1"+ 5 2 56 ! 9+! +J52D2 " 8 !"6 @+!+ B23+ 76 594 +B2 $>0 2 3E$><# 2 3 9+ @"!A 9+!+ @28 89+3 $><;E$><= 76 49+4B "!1 +43 @9"" "! B "!+ 92 @+ 6E D+ 6+2!8 @28 592!.+ " 9+ C 8 + 2 9+ 8 " !B2 " " 9+ +J 8 C + 5+ " 2 23D2 5+3 5 D 4 I2 " 1! "! "" 9+ 7+. ." !++A 9 8 "!6 @28 8" .9 2 3 " 3 76 594 +B2 2 65+ 2+ M$>0=G 2 3 2 !6 8 M$>>=G 8A+ 59 " 9+ " 9+! B2 "43 25 D +8 9+ 1!"D 5+ " !++A 2!592+"4".6 @9 59 +!B2 8 92D+ 7++ + .2.+3 3 ! .9+ 128 R 2! +! " 2 5+ !6 @" 43 !+R !+ 2 4+)96 !2 8+ 46 9+ ! B"8 +J + 8 D+ 2 3 B1"! 2 52B12 . 8 B26 7+ B+ " +3 9+ 6+2!8 $>0PE$>>#9+ + !+ 1!+5 5 " 46B1 2 @28 +J52D2 +3 3+! 9+ 3 !+5 " " ! 8 ! 8 76 B+2 8 " 38 1!"D 3+3 76 9+ +!B2 B1!+ 9 8 @28 9+ !8 .!+2 85 + 5 +J52D2 " @9 59 "! 255 !256 " @"!A 2 3 !+5"!3 8+ 2 +@ 8 2 32!3 "! 2!592+"4". 8 8 9+ !+8 4 8 @+!+ 12! 5 42!46 B1"! 2 "! 2!59 +5 !+ 28 9+ +!2+ B " +" " 9+ "43+8 "! 5 +B14+8 @28 5"D+!+3 7+8 3+ 9+ 42!.+! 2 3 42 +! +B14+ " N+ 8 2 3 "! 85 41 !+ 9+ C +2! 9 . " 9+ 1+3 B+ 24 8 2 +8 2 3 B+ "1+8 !"B 9+ N+ 8 +B14+ 9+ A& " 2+" 8 2 3 9+ +!B+8 " !2J +4+8 2 "@+J9 7 +3 9+ 8+ B 2 46B1 2 " 9+! .!+2 +!B2 3+! 2A .@28 9+ +J52D2 " " +!.2B B 76 9+ +!4 8+ B M$>0>E$>>&G 28 2 !+8 4 " @9 59 9+ B1"! 2 !+4 + 8 !"B 9+ 2B" 8 24 2! " N+ 8 @+!+ 8+5 !+3 "" 9+ 5 6 " +!4 5+ $<## 9+ +!B2 8 C + 928 7++ 5" .@"!A " 9 8 8 + 3+! "!1 +43L8 3 !+5 " "!3+! "" 426 72!+ 9+ + !+ 5 6 " 9+! 5 6 32 .@ "!" 9+ B"8 12! !"B +44+ 8 5 B+8 @9 59 928 7++ +J52D2 +3 76 9+ +!4 8+ B 8E ! + M$><PE$><<G 3+! 9+ 3 !+5 " " 2 3 3+!" 9+ 82B+ 2 81 5+8 4+ 8 M$><<G 2 3 36B2 @9+!+ @"!A 8 " 6+ + !+46 5"B14+ +3 9+! B1"! 2 @"!A 928 7++ 52!! +3 "" 5"B14+ " 2 9+!2 M$><&E$<#$G 76 44+!D" 2+! ! .+ 2 3 2 . 2 M$<#$E$<#=G 76 3"4 ! @2 .4+! 9 4+ +!B2 6 928 7++ 9+ B"8 25 D+ 2 3 8 55+88 4 2 " + .2.+3 !++A 2!592+C "4".6 9+ !+1!+8+ 2 D+8 " " 9+! 2 " 8 92D+ " 7++ 34+ $>>Q 9+ B+! 52 59""4 " 4288 524 " 3+8 @28 3+3 9+ 8 2 3 B+! 52 8 92D+ 7++ + .2.+3 9!++ 42!.+ 3+! 2A .8 2 88"8 M$>>$E$>>;G 2 9+ !. D+ +!2+ B M$><QE$><;G 2 3 8 5+ $><& 2 "! 9 @9+!+ B2 6 42 3B2!A8 " 9+ 2 5 + 5 6 92D+ 7++ 4"52 +3 " 2746 9+ 2."!2 9+ 9+2 +! 2 3 9+ 2B" 8 " 2 " !+ +9+ B+! 52 59""4 248"" 928 +2!46 5"B14+ +3 M$<$#G 2 +427"!2 + 2 3 +JC 92 8 D+ 8 36 " 9+ !+59 9+ B 9+ 8 @9 59 8 +J1+5 +3 8& " "" 7+ 1 74 89+3 !C 9+!B"!+ B+! 52 8 92D+ - 8 8+ 92 3 "" @"" 3+! 2A .8 @9 59 1!"B 8+ "" " !2 A B2. 3+ 2 3 B1"! 2 5+ 2 6 9+6 92D+ 9 9+! "2 +B1 +3 2B+46 9+ +J52D2 " 2!3+8 521 24 " 63 2 3+! 9+ 3 !+5 " " 4+! 2 3 " 6!+ + 762 76 9+ !592+"4". 524 8 + " B+! 52 9+ .4 89 @9"" E$>0< 923 "!.2 I+3 2 "5 + 6 "!9+ !"B " " +44+ 5 3 +8 " C 3" " 3+3 2 859""4 2 9+ 8 $>>P 76 @9 59 2B" ." 9+! @"!A8 +J52D2 " 8 92D+ 7++ B23+ 2 +.24"1"4 8 M$><#E$><$G " +4"8 M$><&E$><<G 2 3 8 5+ $<#& 92D+ 7++ 5" 3 5 +3 8 55+88 446 2 12! 2 .C 42 3L8 .!+2 +8 542 B "" 2B+ 9 8 4 +!+8 8 " 9+ !+B2!A274 !+8 4 8 2 2 +3 76 ! 9 ! D2 8 !+ + @9+!+ 8 5+ $<## 9+ 928 5" C 3 5 +3 +J52D2 " 8 2 "8"8 @9 59 92D+ 1!"D+3 92 28 +2!46 28 Q#### . + 9+ 1+"14 " 9 8 842 3 923 3+D+4"1+3 2 9 .9 3+.!++ " A "@4+3.+ 2! 2 3 85 41 !+ 5" 8 ! 5 " 2 3 3+8 . 5"B "! 2 3 82 2 " 2 3 1"8C 8+88+3 2 +427"!2 + 868 +B " @! . 2 +8 +3 76 "D+!& #### 85! 1 " 8 8 44 3+5 19+!+3

9+8+ !+8 4 8 92D+ 7++ 5" !B+3 2 B2 6 " 9+! 1425+8 !+ + " 2746 2 98+8 8 2 3 . 2 ! 232 76 9+ 24 2 859"42!8 2479+!! 2 3 +! +! 2 " ! 2 76 B+! 52 8 2 242 A28 !" 2 3 +48+@9+!+ 76 9+ ! 89 59""4 B" .+ 9+ 25 D +8 " " 9+! 2 " 8 8 ! 2 89" 43 " 7+ "D+!4""A+3 "! !"B 9+! "! . 2 +3 8+D+!24 B1"! 2 3+! 2A .8 2 +J1+3 " "" 2B" 9!25+ M$>0PG " "" "472859 M$>>QG @9+ 5+ @+!+ 7!" .9 " (+ 2 9+ !+B2!A274+ 85 41 !+3 ! +I+8 2 3 2446 9+ 5"D+! ." " 9+ 5 6 " " 19+8 8 M$><PE$<#PG 9+ 8 ! 2 8 248"" B2 2 2 2!592+"4". 524 B 88 " 2 9+ 8 28 2 7!2 59 " 9+ !592+"C 4". 524 8 + (+ 2 M$><>G 2 89 +J52D2 " 8 92D+ 7++ 5" 3 5 +3 9"3+8 8 5+ $<#Q 76 59 2 3 4 A+ 7+!." @ 9 D2!6 .8 55+88 24 2 8 92D+ 4 B +3 9+BC 8+4D+8 "" !+ + 7 9+ " 3 ." " 2 859""4 9+ 8 @9 59 928 7++ !+5+ 46 3+ +!B +3 76 9+ 24 2 ."D+! B+ @ 3" 7 +346 4+23 24 2 859"42!8 "" " 9+! 7!2 59+8 " 9 8 8 7-+5 9 4+ 9+ !++A8 2D+ 9 8 .+ +!" 846 255"!3+3 "" "!+ . +!8 9+ 1! D 4+. + " 5" 3 5 C .9+8+ B1"! 2 2 3 +J + 8 D+ 3+! 2AC .8 9+ ! 42 3 9+6 9+B8+4D+8 92D+ 7++ + .2.+3 2!592+"4". 524 @"!A8 " +R 24 B2.C 3+ @9 59 92D+ 7++ 52!! +3 " 76 9+ !/ !2 +3 8+- "42!8 @ 9 85 + 5 255 !256 2 3 92D+ 6 +43+3 " 274+ !+8 4 8 9+ 1!+8+ 19"! " R +8 2 2. " +8 2@23 28 +J52D2 +3 9+ + !+ 8 ! 25+ " 9+ 5!"1"4 8 "" 7+3 !"5A M$>>PE$><$G 3 .2B" ." 9+! "7-+5 8 B2 6 2!59 +5 !24 !2.B+ 8 @9 59 1!"D+3 9+ +J 8 + 5+ " @"" +2!46 +B14+8 " 9+ 2 2 +32 .9+ +!8 2 D28 " 2 3 2 8+! +8 " ++ 8 2 +8 " @"B+ 8 4 !+ 2 . 7! 44 2 5"4"! .24 9" .9 7 ! +3 8 5+=>#. + @9 59 ! 89+3 2 +@ 5921 +! "" 9+ 8 36 " 9+ 3+D+4"1B+ " " 5 2! " 9+! .!+2 @"!A 8 55+88 446 5"B14+ +3 76 2@23 28 @28 9+ +J52D2 " " 9+ 1!+5 5 " 8A4+1 "8 2 1 32 ! 8 M$>>$E$<#;G 9+ B"8 2B" 8 9+24 9 !+8"! 2 3 82 2 "! B" 2 5 + !++5+ 9+ !++A8 92D+ 248"" 5"B14+ +3 76 B1"! 2 2 3 8 55+88 4 @"!A 2 4+ 8 8 M$>>QE$><#G 2 9+ B19 2!2 " " !"1 8 M$>><G 2 3 +48+@9+!+ 8 2 !+8 4 " 9 8 5+28+4+88 25 D 6 3 ! . 9+ 128 R 2! +! 5+ !6 !++5+ 8 A "@ "" 8 7+ +! 92 89+ 928 +D+! 7++ A "@ 7+ "!+ +! 9 8 "!6 928 7++ 1 89+3 725A 2 9" 82 3 6+2!8 8"" 92 2.+8 7+ "!+ "B+!!8 B+ @+ 52 !25+ 9+ B .!2 " " +44+ 5 1+"14+ 9+ ! D28 " 8 9+ ! 2 25A8 9+ ! 3+ +2 8 +! 2! 8 5 74"" B 9+ B+ " +! 54+8 @+ A "@ "" 7+ 2 !+ 285+ 5+ " 9+ "2 E 65+ 2+2 1+! "3 92 !+259+3 8 25B+ 2 9" 82 3 6+2!8 +2!4 +! 2 3 B"!+"D+! @+ 52 "44"@ 9+ 3+54 + " 9+ " + 1+! "3 2 3 @2 59 9+ .!"@ 9 " 9+ 8+5" 3 9+ 3+D+4"1B+ " " 9+ 2! 8 5 1! C 5 14+ 255"!3 ." "" 52 " 8 2 3 3 8 5 859""48 8 54+2! "" 8 2 3 9+ @ 3+81!+23 1 74 C 52 " " " !+1!"3 5 " 8 " !++A 85 41 !+ 2 3 2!59 +5 !+ 928 923 2 @9"4+8"B+ 4 C + 5+ 1" 9+ 2! 8 8 2 3 2!59 +5 8 " !" "@ 326 ! 9+!B"!+ 9!" .9 9+ +J52D2 " " + !+ 5 +8 9+ 927 8 2 3 5 8 "B8 " 9+ 2D+!2.+ !++A 2!+ 2B 4 2! " " 46 "" 859"42!8 7 " "" 9+ 2D+!2.+ B2 " "E326 9!" .9 9+ 852 +! ." " 2 5 + "7-+5 8 " 244 A 38 !"B 246 2 3 !++5+ 2 3 9+ ! +J9 7 " 9+ B2 6 B 8+ B8 " 9+ @"!43 2B" ." 9+ B"8 B1"! 2 " @9 59 B 8 "@ 7+ !+5A +3 9+ + !"1"4 2 8+ B" " ! +@ "!A 2 3 9+ 8+ B" " + ! 8 "8 " @9 59 ! 89 "" B+! 52 8 2 !8 E92 3 A "@4+- ." " B2 6 3+12! B+ 8 " !++A 2! 2 3 4 + 9+ 8 " 8 @9+!+ !++A 2!592+"4".6 B26 7+ B"8 82 8 25 "! 46 8 3 +3 2!+ 9+!+ 2B+3 ".+ 9+!@ 9 2 8 2 +B+ " " 5" !8+8 "5528 " 2446 " +!+3 76 +259 ?

% "? D+!8 6 " 24 "! 2 !"C 3 5 " "" 54288 524 2!592+"4".6 8 "!6 " !++A 2! F "1".!2196 " 9+ 8 D+!8 6 " 9 52. " !++A 4 + 8 3 +3 !"B B" B+ 8 5 + 9+ 8 46B1 2 2 3 +419 F 85! 1 " 8 ! F 5 41 !+ (28+8 !59 +5 !+ !++A 2 3 "B2 5" 8 "4 B7 2 D+!8 6 !"3 5 " "" !++A 2!592+"4".6 5 41 !+ 1 .!2196 (28+8 5!"1"4 8 " 9+ 8 "! +44 D+!8 6 !++A 2!592+"4".6 2 82 28 8 "!6 " !++A 85 41 !+ !++A 4 + 2!D2!3 D+!8 6 !++A 2!592+"4".6 "1".!2196 2 3 B" B+ 8 " 2 5 + 9+ 8 V 24+".!2196 1 .!2196 (28+E12 . :"9 8 "1A 8 D+!8 6 !++A 2!592+"4C ".6 "1".!2196 " !++5+ 2 3 " 8 2 "! F (28+E12 .F 5 41 !+ 1 .!2196 24+C ".!2196 !59 +5 !+ !++A 4 + D+!8 6 " 59 .2 2 82 28 2 3 9+ "1".!2196 2 3 B" B+ 8 " 2 5 + 9+ 8 5 + 9+ 2 4 +F 8 "!6 " !++A 2! F 24+".!2196 1 .!2196 D+!8 6 " + 864D2 2 !++A 2!592+C "4".6 !++A 4 +F 1 .!2196 2 82 28 ! 5+ " D+!8 6 "1".!2196 " 52 !++A 85! 1 " 8 !++A 3 24+5 8 !++A 9+2 +! 24+ D+!8 6 "1".!2196 2 3 B" C B+ 8 " 9+ 8 !++A 85 41 !+ 2 3 9+ 4+88+! 2! 8 !59 +5 !+

B 42! 5" !8+8 2!+ " +!+3 2 244 9+ B"!+ B1"! 2 "!+ . D+!8 +8 " @9 59 B26 7+ B+ " +3 12! 5 42!46 ?

+!B2 6 9+ D+!8 +8 " +!4 " 244+ + 1I . 2 3 59 V !+ 59 9+ "!7" + 2 3 5"4+ 3 " D!+ 2 2! 8 "B2 ? "B2 2!592+"4".6 B26 7+!" .9 46 3+ +3 28 9+ 85 + 5+ @9 59 3+248 @ 9 9+ 2 . 74+ !+B2 8 " 2 5 + "B2 5 D 4 I2 " 6 9+ 8 36 " 9+8+ !+B2 8 9+ 4 .9 " " 2 5 + 4 +!2!6 !+5"!38 9+



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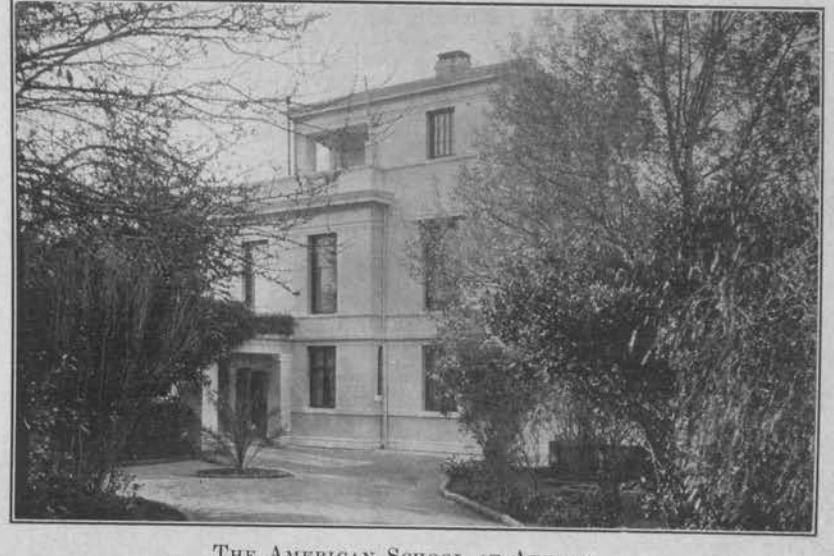

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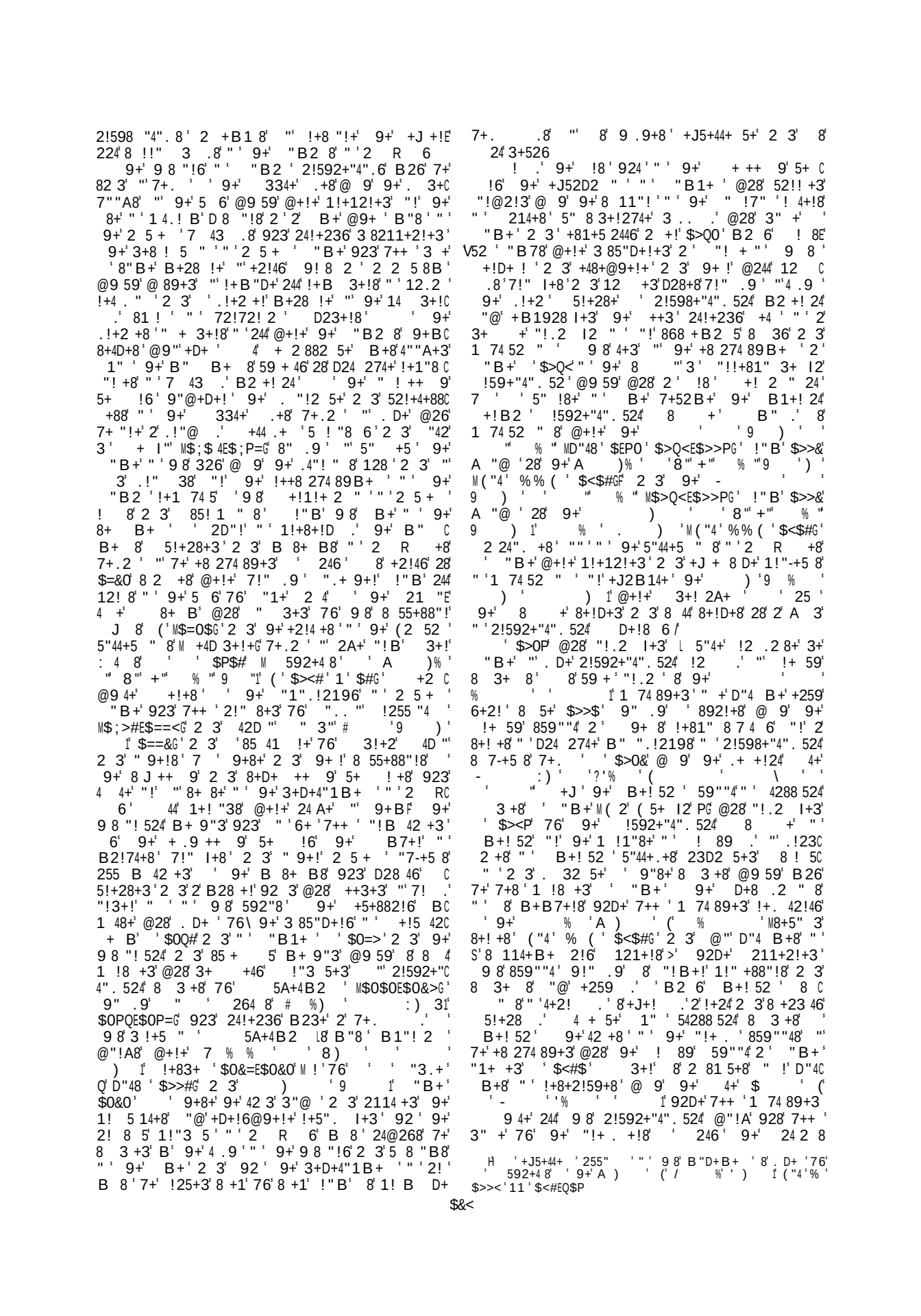

9+B8+4D+8 92D+ " 7++2 34+ 4B"8 244 9+ +J52D2 " 246 !+5+ 6+2!8 928 7++ 5" 3 5 +3 76 9+ 24 2 ."D+! B+ @9"8+ " 5 24 "!.2 " 1 74 52 " 8 9+ 4 % % 1 MB" 946 8 5+ $>0&G "@ ("4 (M$<$#G +! +8 P " 9+ %% 6 9+2 9"! 6 " 9+ 82B+ 2523+B6 2!+ 1 74 89+3 9+ % M("4 $< $<$#G 2 3 9+) % M("4 QQ $<$#G 9+ B 5 124 2!59+C "4". 524 5"B B 88 " "B+ "" 88 +8 9+ - %") M("4 ;>+ $<$#G 2 3 9+ ' % 9 % !+5+ 46 +8 274 89+3 8"@ 7+2 446 44 8 !2 +3 B2.2I +) M("4 = $<$#G 44 9+8+ 1+! "3 5248 ".+ 9+! @ 9 " 9+!8 " 4+88 81+5 24 B1"! 2 5+ "! "B+ !+5"!3 9+ 9 8 "!6 " 2!592+"4". 524 1!".!+88 6+2! 76 6+2! 2 3 B 8 7+ !+23 5" 8 2 46 76 9"8+ @9" 3+8 !+ "A++1 27!+28 " 9+ B+8 9 8 !21 346 3+D+4"1 .8 7-+5 9+ 1! 5 124 +438 54 3+3 3+! 9+ .+ +!24 9+23 " "B2 2!592+"4".62!+2!59 +5 !+ 85 41 !+ 12 .2 3 9+ B "! 2! 8 2 9+8+ "B+ @28 3+7 "! !8 " 9+ !++A 2! " 9+ +44+ 8 5 1+! "3 !"B ! !2 9+! " 46 +259+! " 2! 3 ! .9+ +2!46 3268 " 9+ +1 74 5 89+ ""A "D+! 9+ 2!59 2 3 9+ D2 4 9+ 8"E5244+3 852 "!3+!"! ! 852 E "! 5 5"4 B 9+ 8 ! 5 !+ " 9+ +B14+ 2 3 9+ 61+ "! 3@+44 .8 2 3 "B78 28 @+44 28 3+! D+3 2 5+! 2 + 3+ 56 !+24 8B 85 41 !+ 2 3 9+!@9"4+ +59 R + 9+ B "! 2! 8 !"B !++5+ 89+ ""A 9+ " 5 2 3 "! 9 2 "!3+!8 2 3 9+ .+ +!24 142 " 8 59 7 43 .8 28 9+ 9+2 +! 9+ 5 !5 8 9+ 1"! 5" 2 3 9+ 728 4 52 9+ "!2 8 !!" 3+3 76 .!+2 1 74 5 7 43 .8 @+!+ B"3+4+3 2 +! 9+ !++A %)1 2 3 3+! !++A C 4 + 5+ 1! D2 + 9" 8+8 7+52B+ B"!+ 4 J ! " 8 2 3 B"!+ +427"!2 +46 3+5"!2 +3 2 3 2 ++4 ." !7+2 6 @28 3+D+4"1+3 +D+!6 +43 " 2! 4 9+ 9 !3 5+ !6 = 2 3 +D+ 42 +! 9+ "B2 923 7++ 8" + " 3+ + 3 .9 8 3+1+ 3+ 5+ +J + 3 .9 8 8@26 2 3 3+D+4"1C .9 8 1"4 524 "!.2 I2 " 92 9+ 923 4 4+ B+ "! 9+ 5 4 D2 " " 2! @9+ 244 9 8 @28 128 2 3 9+ 923 " 9 .B"!+ "+2! 92 8 @9+ 9+ @28 2 428 2 1"8 " 3+D+4"1 2 2! " 9 8 "@ 9+ " 3 9 B8+4 25+ 25+ @ 9 2 5"B1+ "! 8 B B+28 !2746 9 8 8 1+! "! 244 9 .8 2! 8 5 92 9+ 6 +43+3 5"B14+ +46 2 3 " 5+ "! 2 " 9+ !++A 4 + 5+ 3 6+ 9+ "B2 @28 " B+!+46 2 842D 89 B 2 "! 9" .9 9+ 7"!!"@+3 9+ +4+B+ 8 !"B ! ! 2 2 3 !++5+ 9+ B1!+88+3 9+B @ 9 9 8 "@ 8 2B1 2 3 3+D+4"1+3 2 2! @9 59 +R 24 "+ !++A 2! !"B 9+ 1" D +@" 3+24 7+2 6 6+ 923 8 "@ 8 !+ . 9 2 3 592!25 +! 8 5 +2 !+8 R + 92!B" 6 @ 9 9+ .+ 8 " 2 5" R +! .!.2 I . 2 3 ."D+! .1+"14+ + " 3 +@ @268 " 8 .9+2!59 +5 !24+4+B+ 8 9+3+D+4"1+3 9+5"B1"8 +"!3+! 2 3 9+ 9" "!2!6 5"4 B @ 9 85 41 !+8 !+4 + 9+ !2 8 "!B+3 9+ 2."!2 9+ 728 4 52 9+ 9+2 +! 2 3 9+ 5 !5 8 9+ D+ +3 9+ 2B19 9+2 +! 2 3 9+ 72 98 2 3 9+ 8 !1288+3 244 9+ 1+"14+8 " 2 R 6 " " " 244 B+ 9 8 .!+2 @"!A8 " 1 74 5 4 6 8 59 28 7! 3.+8 2R +3 5 8 2 3 B 4C 2!6 !"238 '89"! 244 9+ 2! 8 9+ "B2 8 ! 5A " +@ @268 "! 9 B8+4 2321 .9 8 2! 8 5 9+! 2.+ 255"!32 5+ @ 9 9 8 "@ 28 +8 2 3 ++38 9+ 9 .9+8 4+D+4 " 2! 8 5 +J5+44+ 5+ @28 !+259+3 9+ !8 5+ !6 2 3 2 924 " 9+ B1 !+ 2 +! @9 59 "B2 2! 6 +43 .B"!+ 2 3 B"!+ " 9+ 2 " 24 + 3C + 56 " 9+ 5"4"882 5" 8 ! 5 " 2 3 " 9+ 4"! 3 3+5"!2 " !21 346 3+54 +3 9+ 7!2 59 " 2! @9 59 9+ "B2 8 @+!+ B"8 "! . 24 @28 2!59 +5 !+ 2 3 9+ 59 + 32B+ 24 +4+B+ 8 +B14"6+3 76 9+ !2!59 C +5 8 @+!+ 9+ 2!59 2 3 9+ D2 4 @28 42!.+46 9!" .9 5!+28 .!+3"B 2 3 7"43 +88 9+ 8+ " 9+8+ +4+B+ 8 92 "B2 2!59 C +5 !+ 3+D+4"1+3 2 2 " 24 592!25 +!2 3 @28 274+ " 54"8+ D28 +! "!8125+8 + 5 BC 7+!+3 76 5"4 B 8 7+.2 8 B14 5 6 "44"@ .54"8+46 9+ ! 852 B"3+48 9+ ""A "D+! 9+ !++A "!3+!8 2 3 592 .+3 9+B .!23 2446 .!+@ B"!+ +427"!2 + 2 3 1!" 8+ ! 59 "! 2B+ 2 " +81+5 2446 @ 9 5"4"!+3 B2!74+ 2 3 2446 3+.+ +!2 +3 " B+!+ 7 . +88 2 3 1" 3+!"8 6 9+ 2D2 4274+ B2 +C ! 248 @+!+ 2 !8 " 46 9+ 8" D"452 5 2 " 9+ + .97"!9""3 42 +! 8 114+B+ +3 76 1+1+! " !"B 9+ 472 !+. 2 3 !2D+! + !"B 9+ D244+6 " 9+ " +2! 7 ! 7 76 9+ + 3 " 9+ +1 74 5 9+ 8+ " 72A+3 7! 5A8 5" 5!+ + 2 3 B1"! +3 B2!74+ 9+ 8 2 32!3 7 43 .B2 +! 248 " 9+ B1 !+ 923 5"B B+ 5+3 5"B7 2 " " 4 B+ 2 3 9+ !+3 D"452 5 +2! 9 A "@ 28 44 1!"C 3 5+3 2 963!2 4 5 5+B+ @9 59 B J+3 @ 9 !2.B+ 8 " 8 " + " 7! 5A "! 42 +! B+8 " B2!74+ "!B+3 2 5" 5!+ + " +R 24+3 92!3 +88 2 3 3 !27 4 6 "8 @2448 " BC 1+! 24 B+8 @+!+ 5" 8 ! 5 +3 " 9 8 5" 5!+ + @ 9 2 25 ." 7! 5A8 "!8B244 8 " +8 " !+. 42! 8921+ @ 9 1" 8 2 4 .@2!3 9 8 2.2 7+ .! 89+3 @ 9 2 5"D+! ." 8 55"! " 5946 5"4"!+3 B2!74+ 84)78 M 44+ / . .' (% . 1 " 3" $><=G "4 3 2!59+8 248" 2 3 D2 4 .8 @+!+ B23+ " 9 8 5" 5!+ + ? 2 25 @9 59 B"!+ 92 2 6 9 .+48+ 255" 8 "! 9+ 592!25 +! 8 58 2 3 3+D+4"1B+ " " "B2 2!59 +5 !+ 9 8 B+ 9"3 "5" 8 ! 5 " 9+5"4 B 923 " 8 ! 5 !24 5 " 2 3 @28 !+R + 46 + .2.+3 28 2 B+!+ 3+5"!2 D+ +4+B+ " 9+ 8 ! 25+ " @2448 "! 1 442!8 " 5" 5!+ + 9" .9 9+!+ @+!+ B2 6 +J5+1 " 8 +81+5 2446 +B14+8 "! 1"! 5"+8 @9 59 5"4 B 8 @+!+ 8+3 3+1+ 3+ 46 " 8 8 2 9+ + 2742 !+ 2 3 9+ !"" 9+ !++A "!3+!8 9+ "! 5 2 3 " 5 B+ @ 9 5"B12!2 D+46 4 4+ 2D"!2 "B+ 28 9+6 @+!+ " 8 B14+ 2 3 8+D+!+ 211+24 8 !" .46 "B2 28 + 2 6 7

9+ +2!46 1+! "3 9+ 9+ "! 5 3"+8 211+2! 8 " 9+ 1 !+ !++A "!B 7 9+ 8"E 5244+3 852 "!B @9 59 923 7++ 23"1 +3 !"B 9+ ! 852 8 9 8 61+ "5"4 B 2 728+ @28 1425+3 3+! 9+ 4 .@28 "B +3 2 3 D2! " 8 "! 2B+ B +4+B+ 8 @+!+ 233+3 2 9+ "1 ! . 9+ B1 !+ 9 8 "!3+!@28 8 2446 4 B +3 "+J +! "! 8+ 2 3 9+ 4"@+8 8 "!6 " 7 43 .8 4 A+ 9+ "4"88+ B 2 3 9+ 9+2 +! " 2!5+44 8 @9 59 2 8+! +8 " 5"4 B 8 " 9+ " 5 "!3+!"B 12! " 9+ +J +! "! "! 2B+ " 9+ 8+5" 3 8 "!6 2!B"!+ 1"1 42! @ 9 9+ "B2 8 @28 9+ B"!+ +427"!2 + 2 3 "! 2 + "! 9 2 "!3+! @9 59 9+6 8+3 @ 9 2 D+!6 ! 59 + 2742 !+ 6 2 5"B7 2 " " 9+ "! 9 2 @ 9 9+ " 5 521 24 2 +@ "!3+! @28 3+D+4"1+3 9+ B "8 +427"!2 + 2 3 B"8 +92!25 +! 8 52446 "B2 " 244 9 8 8"E5244+3 "B1"8 + 521 24 @28 !+R + 46 + ! +9+3 2 28 5 @268 2 3 8"B+ B+8 +D+ 9 B2 . !+8 @+!+ !"C 3 5+3 28 "! +J2B14+ 2 . !+ " +!5 4+8 2 521 24 2 9+ 2 98 " 2!252442 9+ + !6 " 9+ 24 2 !""18 "" "B+ 2 3 9+ +8 274 89B+ " " 9+ 2 " 24 521 24 9+!+ $>0# B2!A 2 B1"! 2 +!2 2!592+"C 4". 524 8 3 +8 9+ +J52D2 " 8 B23+ 5" +5 " @ 9 9+ 7 43 ." " +@ 8 !++ 8 2 3 +@ 9" 8+8 42 3 72!+ B2 6 1!+D " 846 A "@ 2 5 + 8 ! 5 !+8 2 3 7!" .9 "" 4 .9 8"" B2 6 8 2 +8 2 3 " 9+! 2! 8 5 1!"3 5 8 " 2 R 6 92 9+ B 8+ B8 5" 43 " 5" C 2 9+B 3 233 " "" 9+8+ 255 3+ 24 3 85"D+! +8 .!+2 23D2 5+8 @+!+ B23+ 9+ 868 +B2 5 52B12 . " +J52D2 " 52!! +3 " 76 9+ +@ ."D+! B+ 9+ 242 + 44 9+ (442 2! +8+ 923 1288+3 $>&$ "" 9+ 92 38 " 21"4+" @9"" 923 52 8+3 +J + C 8 D+ +J52D2 " 8 "" 7+ B23+ "! 9+ 1 !1"8+ " 426 .72!+ 9+!+B2 8 " 9+ B1+! 24 12425+8 9+ 5" !8+ " 9 8 @"!A W$>&<G 9+ 4"@+! 4+D+48 " 9+ 8"E5244+3 " 8+ " D 2 923 7++ 54+2!+3 2 3 9+ 9!++ !""B8 @ 9 +@244 12 .8 7!" .9 "" 4 .9 9+8+ +J14"!2 " 8 @+!+ "@ 5" +3 2 3 +J + 3+3 "D+! 24B"8 9+ @9"4+ 8 ! 25+ " 9+ 9 44 4 2 2 !46 54+2! 3+2 " 9+ 211+2!2 5+ " 9 8 2! 8 "5!2 5 !+. " " " B1+! 24 "B+ @28 "7 2 +3 9+ "! . 24 12425+ " . 8 8 @9 59 @28 + 42! .+3 2 3 !+7 4 B"!+ 8 B1 " 8 289 " 76 "B 2 8 8 "" 2 42!. + J + 5" 5+24+3 3+! 9+ 7 43 .8 2 3 .!" 38 " 9+ (442 448 7 9+ ."D+! B+ 8 "@ 1"88+88 " 9 8 248" 2 3 @ 44 1!"72746 +J52D2 + 2 2 +2!46 32 + 9+ 6+2! $<#0 @ +88+3 9+ +J52D2 " " 9+ 4"@+! 4+D+48 2 9+ @+8 5"! + " 9+ 9 44 @9 59 928 24@268 7++ 288"5 2 +3 @ 9 9+ " 32 " " "B+ +!+ "! C 52 " @2448 2 3 2 !+8+!D" !" !2 @2 +!" D+!6 +2!46 B+8 @+!+ 3 85"D+!+3 2 3 248"" 2 5+B+ +!6 @ 9 1! B D+ 7 ! 248 @9 59 2A+ 5" C +5 " @ 9 8 B 42! 1!+9 8 "! 5 5+B+ +! +8 " 3 !+5+ 6+2!8 9+ "! B 2 3 " 9+ ! 24 8++B " 89"@ 92 B"!+ 92 " +8+ 4+B+ B 8 92D+/ "55 1 +3 9+ !+. " "

9+ S 8+D+ 9 448T 28 +2!46 28 9+ 9 "! + 9 5+ !6 5 9+ 44 8 . 52 5+ " 9+8+ 42 +8 3 85"D+! +8 9"@+D+! 8 "6+ 2112!+ 9+ "B2 " "! B 4" .E5" +3 +J0 52D2 " 8 92D+ 592 .+3 9+1 5 !+8R + 2B1"" (255 "" " 2 9 3!+3 6+2!8 2. "" "" 2 3!+2!6 @28 + ? !+4 +D+3 9+!+ 2 3 9+!+ 76 !+5+ 46 142 +3 !++8 2 3 4"@+!8 ? 44 " ! 8 2 3 2!59 +5 !24 !2. B+ 8 "! 9 8 4"88 " 2 !24 7+2 6 9"@+D+! 9+!+ 8 2B14+ 5"B C 1+ 82 " " ! 5!+28+3 A "@4+3. + " "B2 "1".!2196 2 3 2 R +8 2 3 9+ 4 .9 92 928 7++ 89+3 " "B2 9 8 "!6 12! 5 42!46 " 9+ +2!4 +!+1+! "38 9+ !8 924 " 9+ 428 5+ !6 +81+5 2446 3+! 9+ 3 !+5 " " " 2!4 +2 2 3) +! $>Q0 " " 776 5" C 8 3+!274 + 1"! " 8 " 9+ "! 9@+8 +! + 3 " 9+ "! B @+!+ 5"D+!+3 2 3 9+ 84"1+ " 9+ 21 "4 + @ 9 9+ " 32 " " 9+ 27 42! B @28 42 3 72!+ +! $>0# 9+ @"!A @9 59 923 7++ +.4+5 +3 "! 8+D+ ++ 6+2!8 @28 2.2 2A+ 1 76 9+ +@ ."D+! C B+ 2 3 928 7++ D ."!" 846 1 89+3 "!@2!3 0?@ 9 +!! 1 " 8 ? 4 9+ 1!+8+ B+ 12! 5 42!46 3+! 9+ 8 1+!D 8 " " "82 "!+ 2 5 2 2 3 " 9+ @9"4+ 2!+2 " 9+ "! B @28 "@ !++3 !"B +2! 9 2 3 ! 77 89 9+ +B14+8 " (+8 2 2 3 D 8 4 4 8 @+!+ +J52D2 +3 9+ 25!2 (2 @28 "1+ +3 1 !"B 9+ +B14+ " 2 8 2 "" 9+ 28 4 52 " 8 2 +2 3 9+ " 8+ " 9+ (+8 248 @28 3 85"D+!+3 B"!+ B1"! 2 2!+ 9+ !C 8 4 8 " 9+ 42 +8 52B12 . @9 59 7+.2 $><> 9+ +J52D2 +3 2!+2 8 "@ 446 @ 5+ 28 .!+2 28 @28 + 6+2!8 2." 2 3 +J14"!2 " 928 7++ 1 89+3 "" 3++1+! 4+D+48 92 +D+! 7+ "!+ 7 @ 9" 3+8 !"6 .9+ B" B+ 8 " 42 +! B+8 @9 59 " + !+8 1" 9"8+ " 9+ +2!4 +! 1+! "38 9+ B"8 8 ! A .3 85"D+! +8 B23+ 9+ 5" !8+ " 9 8 @"!A @+!+ 9+ 8"E 5244+3 21 8 .+! @ 9 9+ 89! 2 3 D+!6 2 5 + 85! 7+3 8 +4+ 7+ +2 9 9+ 81! .2 3 89! + " : ! 2 9+ +2!46 9! 8 2 28 4 52 " 2! 2 R 2 9+ 1! B D+ 5+B+ +!6 9+ 728+ " 9+ +R +8 ! 2 8 2 + " " "B 2 9+ 25 8 ! 8 2 3 9+ ! 7 24 !2+ "! B $<#> @"!AB+ @+!+ + .2.+3 54+2! .9+ 28 4 52 B 4 2 2 3 3 . .+2!9+ !59 " 8 9+ + "! "" 4"52 + 9+ 8 + " 9+ +B14+ " : 11 +! 2 "! 9+!+J52D2 " 8 2 3 +2! 9+ "! B +81+5 2 6 9+ "B B @ 8 9"1+3 1!"5++3 28 !21 346 28 1"88 74+ 2 3 8 ! 9+! D24 274+ !+8 4 8 7+ !+259+3 + " 89" 43 7+ B23+ 1288 ." 9+ 814+ 3 3 9" 8+ " 9+ . 8 2 1+! "3 @9 59 52B+ "" .9 9+ .2!3+ " " 9+ 2! +8 2 25!"88 9+ 7+!3 ! .9+7 43 ." " 9+ +@ ! D+! +B72 AB+ $>0> 8 @+ E1!+8+!D+3 @2 12 .8 7+4" ." "" 9+ 8"E52 +3 8+5" 3 8 64+ 2 3 "! 7+2 6 ! 59 +88 2 3 2 9+ 82B+ B+ ."" 3 28 + 2!+ 28 2!8 1+! "! "" B "8 " 9+ "B1+ 2 12 .8 28 9+ 521 24 " 9+ +B1 !+ @28 8 1+! "! "" 9+ 4+ 5" !6 "@ " 2B12 2 9+ 5+ 4 .8 " 8 55" "" "! 2B+ +3 @ 9 .!25+ 4 12 +! 8 ! +

B2 +! 24 2 3 9+ +! "! @2448 " 9" 8+8 2!+ "@ "4" .+! 5"4"!+3" 46 7 2!+ 3+5"!2 +3 @ 9 !+24 12 .8
9+ +2!4 +! 8 3+ 8 " "B1+ 2 2!598+E "4".6 923 . D+ " 46 8 1+! 5 24 2 + " "
9+ @244 12 .8 2 3 !+B2 +3 "! 2 " 89"@ 92 9+ S "B1+ 2 8 64+ T @28 !+24 6 2 8+! +8 " 8+D+!24 3 +!+ 8 64+8 R +3 8 5 !"B " +2 " 9+! 8 928 7++ 3 52 +3 27"D+ @28 @ 9 9+ 8 !" .+44+ 8 5 4 + 5+8 " 9+ S 2 T 1+! "3 92 !++A " 3 +88 "! 5"4"! B23+ 8+4 +4 2 "B1+ 7 " 46 "8" 2! 28 " 52 8+ 9+ !"3 5 " " 9+ S !8 8 64+ >" 3+5"!2 " @9 59 9+ @244 5"D+!+3 @ 9 8 55" @28 B23+ " B 2 + 76 5"4"! 2 3 !+4 + 2 8 ! 25+ D+ ++!+3 @ 9 84278 " 5"4"!+3 B2!74+ 9+ B "8 .+ 4""! " 255"B12 6 9+8+ @2448 @28 B"82 5 12D+B+ 8 59 "! +J2B14+ 28 9+ B"82 5 1 5 !+ " 4+J2 3+! 72 4+ 3 85"D+!+3 $>;$ 9+ " 8+" 9+ 2 " 9+! 1+! "3 " " 9+ "B2 5"4" 6 2 +@ B+ 9"3 " @244 3+5"!2 " 52B+ "D". + 9+ S 8+5" 3 T "! !59 +5 !24 8 64+ @9 59 8 44 B 2 +3 9+ D+ ++! ." B2!74+ 9" .9 @ 9" 9+ 2 3 " !+4 + 7 233+3 D2! " 8 2!59 +5 !24 3+8 . 8 9 8 8 64+ S !+B2 +3 D". + " 9+ B+ " . 8 8 2 3 9+ .2D+ 1425+ " 9+ 9 !3 " !" ! 2 + 8 64+ @9 59 8 592!25 +! I+3 76 2 !++!" 8+ " "! 2B+ 2 3 9+ !"3 5 " " 3+8 . 8 2 3 85+ +8 8 ..+8 D+ " 2 .61 2 " ! T 8 9+!+ "!+ 2 !24 " 288"5 2 + 9 8 8 64+ @ 9 9+ 1+! "3 @9 59 "44"@+3 9+ 5" R +8 " .61 2 3 8 5" D+!8 " " 2 "B2 1!"D 5+ M;# . + 4 S 9+ Y " ! 9 "!" ! 52 + 8 64+ 52B+ 27" 9+ 6+2!P# ! 2 3 !+1!+8+ 8@ 9 8 D"4D+3 2 3 2 28 5 3+8 . 8 9+ 428 8 2. + 9+ 3+D+4 "1B+ " " "B1+ 2 @24 3+5"!2 " T M 2 E +48+6 11 =; G 2 28 9+ R " 2 " 8 89"@ 9+43 92 9+8+ " !8 2.+8 "44"@+3 " +2 " 9+! ! 2 3 28 2! 28 9+ !8 2 3 8+5" 3 8 64+8 2!+ 5" 5+! +3 9 8 8 1+! +5 46 54+2! 52 " 7+ 5" 8 3+!+3 +8 274 89+3 92 9+ 9 !3 2 3 " ! 9 @+!+ " 5" +B1"!2 +" 8 9+ 24 D 5 "!6 " 9+ " ! 9 "D+!" 9+ 9 !3 8 64+ 9+!+ . " " +!" @28 R + 92!B" 6 @ 9 9+ + 3+ 5 +8 " 9+ B+ 8 " 5" !8+ 1+! +5 46 "7D " 8 92 9 8 3+D+4"1B+ " @24 3+5"!2 " @28 " 5" +3 " 9+ 5"B12!2 D+46 B1"! 2 2B12 2 "@ "B+ 928 6 +43+3 8"B+ +J2B14+8 2 3 81+5 B+ 8 92D+ 5"B+ " 4 .9 +48+@9+!+ 7 9+ 8 36 " "! . 8 2 3 4 + 5+8 9+ 9 8 "!6 " 2 5 + @24 3+5"!2 " 8 28 6+ " 46 @+44 7+. 9+ B2 +! 248 2!+ 7+5"B .27 32 ?" 9+ " 8+ " 9+ (+ 3 85"D+!+3 $><=E$><P 24" 928 85"!+8 " 1 5 !+8 ? 2 3 8 +236 1!". !+88 "@2!3 44+! A "@4+3.+ " 9+ B "! 2! 8 " 2 R 6 " . D+ +D+ 2 8 +! 5 24 255" " 9+ D28 B2 +! 248 9 8 +43 @9 59 2!+ "@ !+28 !+3 9+ B 8+ B8 @" 43 !+R !+ 2 D"4 B+ "! 9+ 1!+8+ 1 !1"8+ 2 44 8 !2 " "! @" B 8 8 5+ $><=E$><& 9!" .9 +J52D2 " 8 @9 59 @+!+ B23+ 2 "85"!+24+ +2! "B1+ @+ 923 " ! !8 .4 B18+ " 9+ 2!!2 .+B+ 8 " 2 2 5 + 5" !6 !+8 3+ 5+ 9+ B "8 BC 1"! 2 S 3 T @28 2 +427"!2 + 8+ " 8 4D+! 3 89+8 2 3 + 8 48 ? $#;1 +5+8 ? @9 59 9+ "@ +! 923 7++ 274+ " 52!!6 2@26 @ 9 9 B 2 9+ B+ " 9+ 3 828 +! @9 59 "D+!@9+4B+3 "B1+ 2 3 8 D 5 6 9" .9 9+ 923 24!+236 .2 9+!+3 " .+ 9+! "! 92 1 !1"8+ " C @ 98 2 3 .9+ + "! 8 " 9+ 24 2 ."D+! C B+ " "1!+D+ 8 +J1"! 9 8 1! 5+4+88 !+28C !+ " 2 5 + "!+ 5 2! 8"" " 3 8 @26 " 2! 8 @9+!+ 8 "@ 1!+8+!D+3 9+ " D!+ 9+ @" 5 18 @ 9 9+ 8A+4+ " 8 9 .9 !+4 + .!" 1+3 @ 9 19 4"8"19+!8 2 3 1"+ 8 1!"72746 52B+ !"B 4+J2 3! 2 9+ 7"@4 @ 9 9+ 9 .9 !+4 + 9+ 7" "B !+1!+8+ .4+JC 2 3! 2 28 2 ."33+88 " " 8+4 +J+5 +3 .61 8 8 !+46 2 5"16 " 2 4+J2 3! +@"!A 9+ " 9+! 92 3 9"8+ 1 +5+8 @9 59 1"! !26 9 8 "! 52 85+ +8 !"B 9+ 4 D+8 " . 8 8 2 3 7+! 8 2 3 9"8+ @9 59 2!+ 23"! +3 @ 9 "B2 1"! !2 9+238 2!+ " 5" !8+ "B2 " "! . "8 " 9+ 1 +5+8 2!+ 3" 7 4+88 " "B2 +J+5 " 2 3 1"72746 " 9+ . 8 2 2.+ 9" .9 9+ 4 + 5+ " 4+J2 3! + 2 3 .+ +!24 " +44+ 8 5 B"3+48 B 8 " 7+ "!." + " 9+! 8 4D+! 274+ 8+!D 5+ 4 4+ 2 244 +! "! " 92 " "85"!+24+ @28 " 3 $>&> 2 43+89+ B 2 3 8 "@ +!4 9+8+ @" 5"44+5 " 8 ." .+ 9+!" @ 9 8"B+ " 9+!8 " 4+88 B1"! 2 5+ 2 3 9+ 3 C D 3 24 "7-+5 8 +2! 9+3 D2! " 8 1425+8 . D+ 2 2 !46 5"B14+ + 3+2 " 9+ @"!A " 9+ "B2 8 4D+!8B 98 a "! 9+ 8 36 " 2 5 + 1" +!6 28 @+44 28 " @"!AB2 89 1 ."43 7!" I+ !" D"!6 .4288 2 3 1!+5 " 8 8 " +8 +J + 8 D+ B2 +! 248 2!+ "@ 2D2 4274+ +23+!8 @9" 3+8 !+ " 1 !8 + 9+ 8 7-+5 ! 9+! @ 44 3 9+ +5+8C 82!6 3 !+5 " 9+ 8+4+5 +3 7 74 ".!2196 . D+ 7+4"@ 8 2 8 7-+5 " 8 36 9+ 5"44+.+ 2 4 9+ D+!8 6 "B2 2!592+"4".6 928 +D+! 542 B+3 2 3 3"+8 " 6+ !+5+ D+ 28 B 59 2 + C " 28 !++A 2!592+"4".6 2 3 2! 9+!+ 2!+ 8 . 8 9"@+D+! " B1!"D+B+ 9 8 !+.2!3 2 3 B"8 " 9+ 7+ +!" B+! 52 2 3 2 23 2 8 " 8 "44"@ . 9+ +J2B14+ " +!B2 D+!8 +8 +81+5 2446 "@" +!" 8 ! 5 " " !" B"!+ 7!2 59+8 " 9+ 8 7-+5 9+ 5" !8+8 B"8 5"BB" 46 . D+ 2!+ 9"8+ "B2 ! D2 + +7 8"B+ " 9+ 4+23 . B D+!8 +8 B"!+ 12! 5 42!46 9"8+ @9 59 92D+ .!23 2 + 859""48 " 9 .9 !2 A 8 ! 5 " 8 8 2446 " +!+3 .+ +!24 "B2 !598+"4".6 "B2 ! 2 3 !59 +5 !+ "C 1".!2196 2 3 B" B+ 8 " "B+ 2 3 2 +@ 1425+8 "! +J2B14+ 9 52." "4 B7 2 2 3 :"9 8 "1A 8 B 8B2 58 "B+C B+8 28 2 24+ 2 B2 @9" 8 1! B2! 46 +!C +8 +3 9+ !++A +43 . D+8 5" !8+8 " 9+ "B2 8 3+ 248" B"!+ " + 9+ "B2 2!592+C "4".6 8 3 D 3+3 2B" . 9+ 2 8 8 2 3 9+ !++A 2!592+"4". 8 8 28 8 "! +J2B14+ 2

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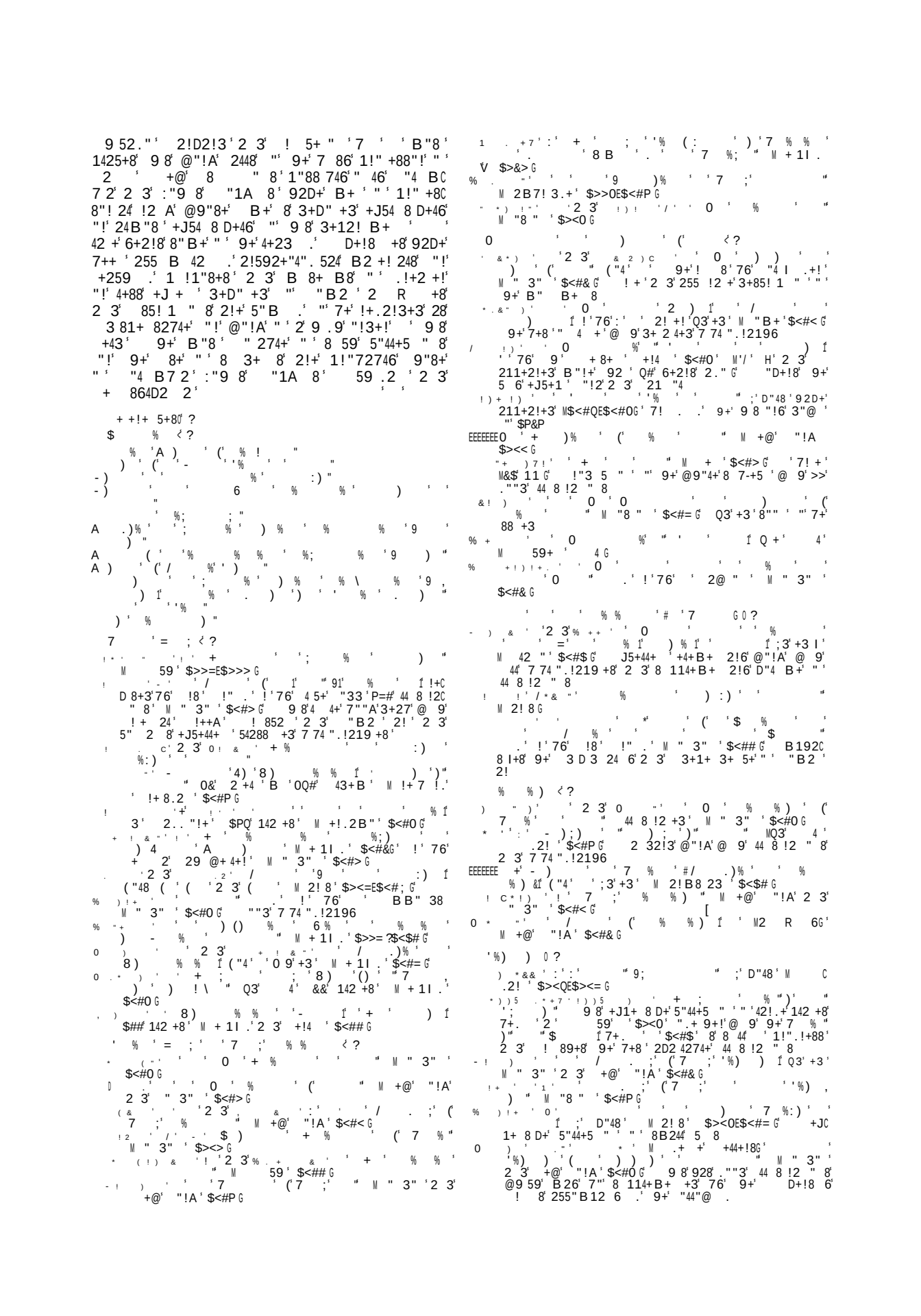

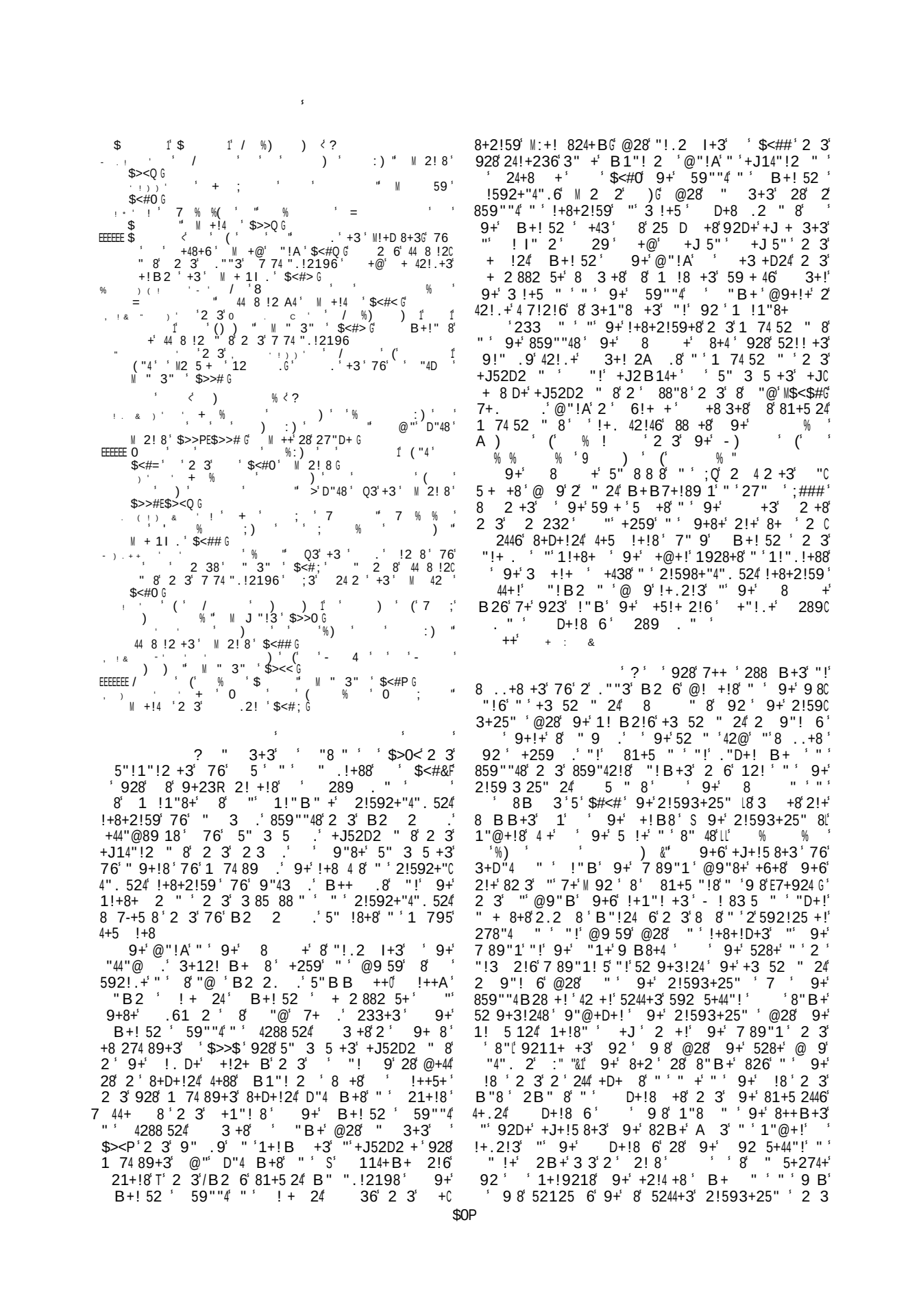

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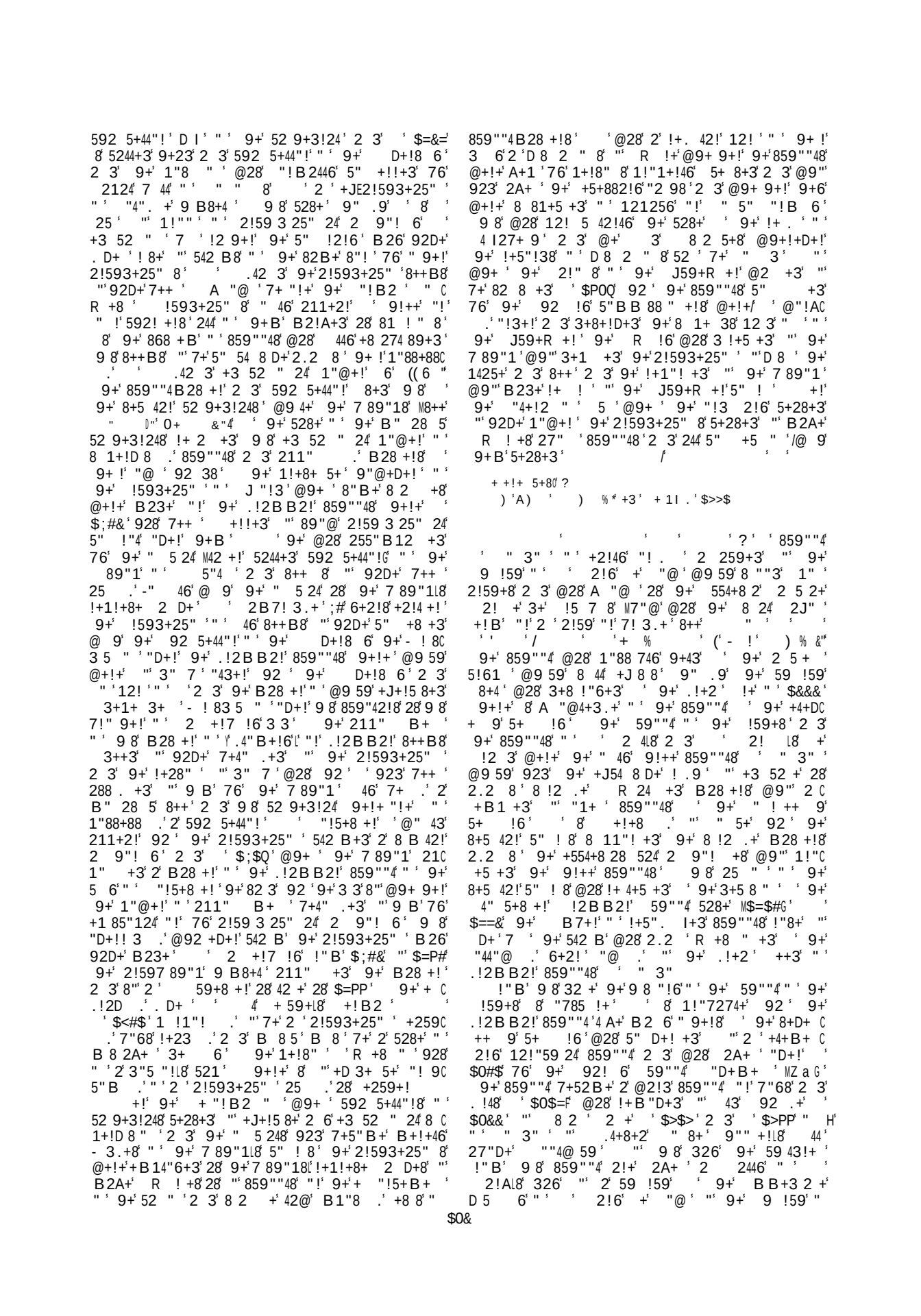

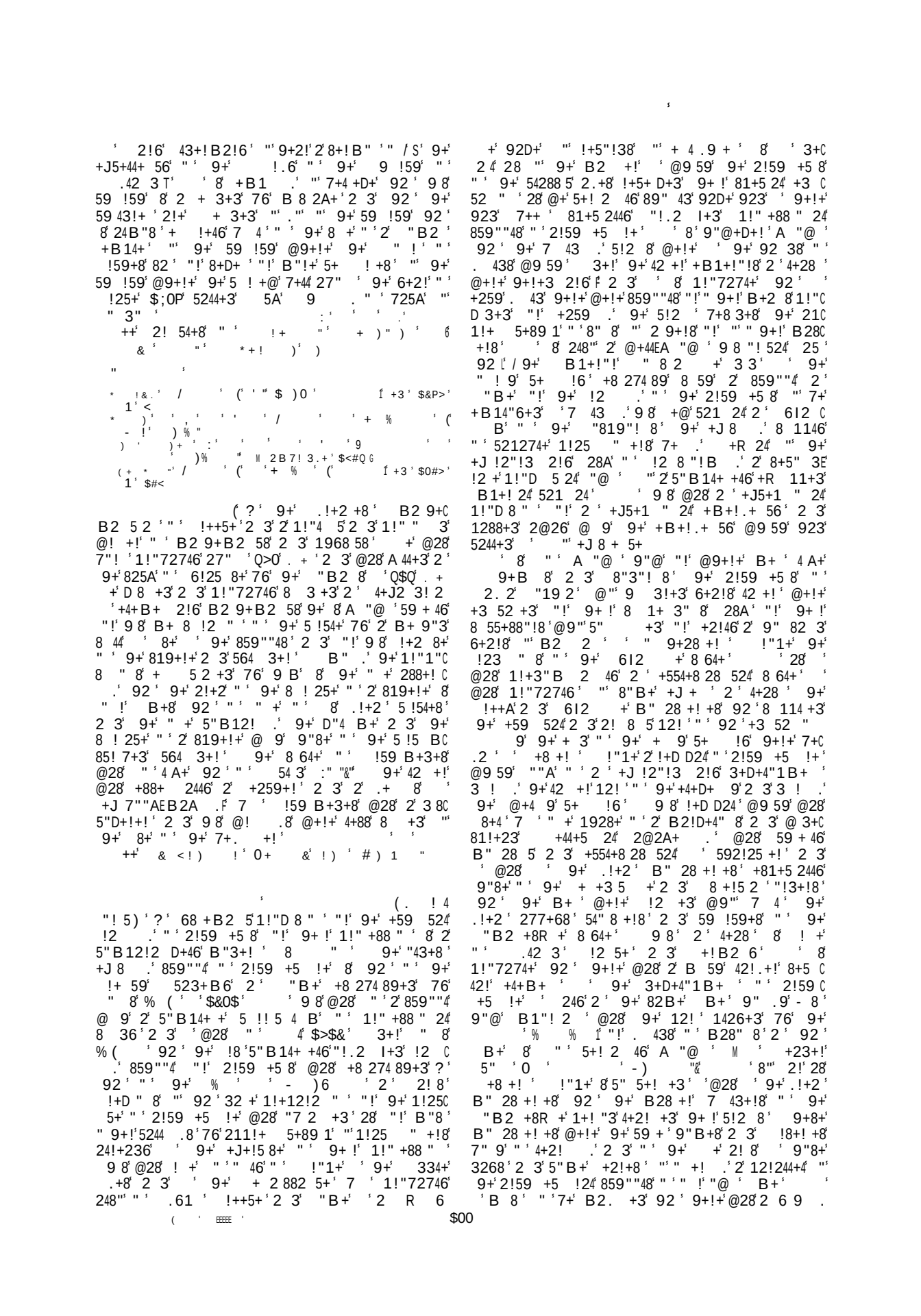

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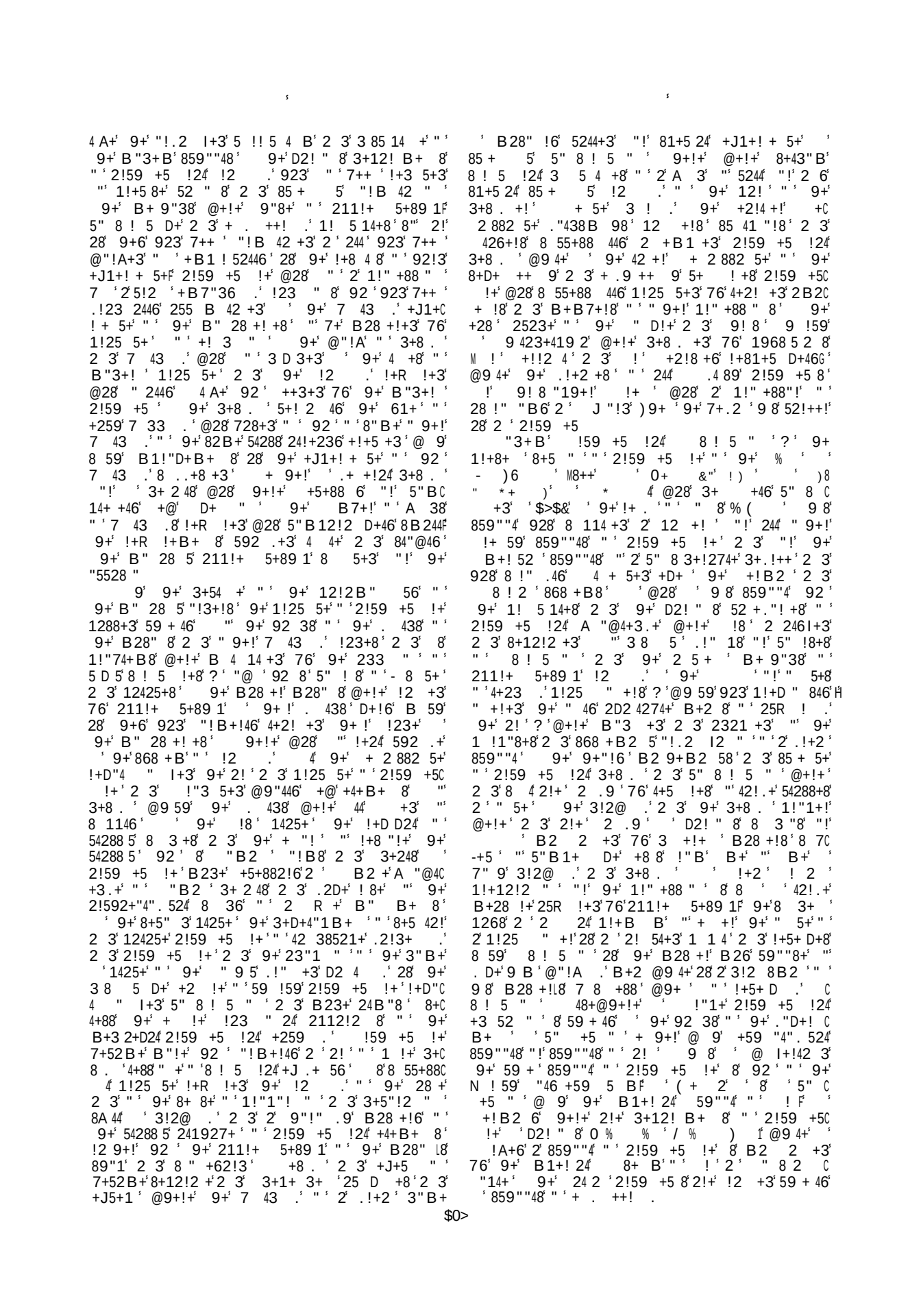

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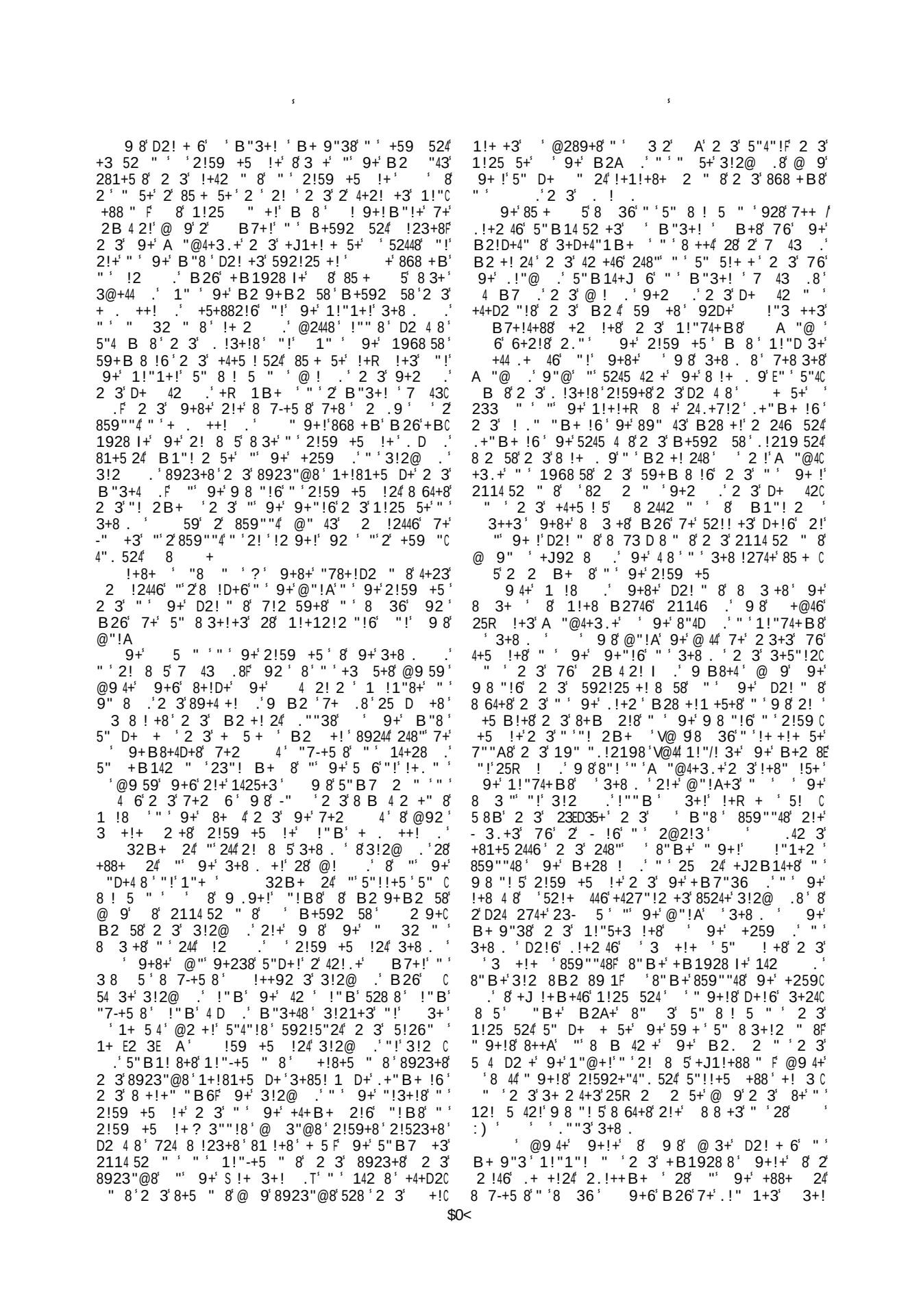

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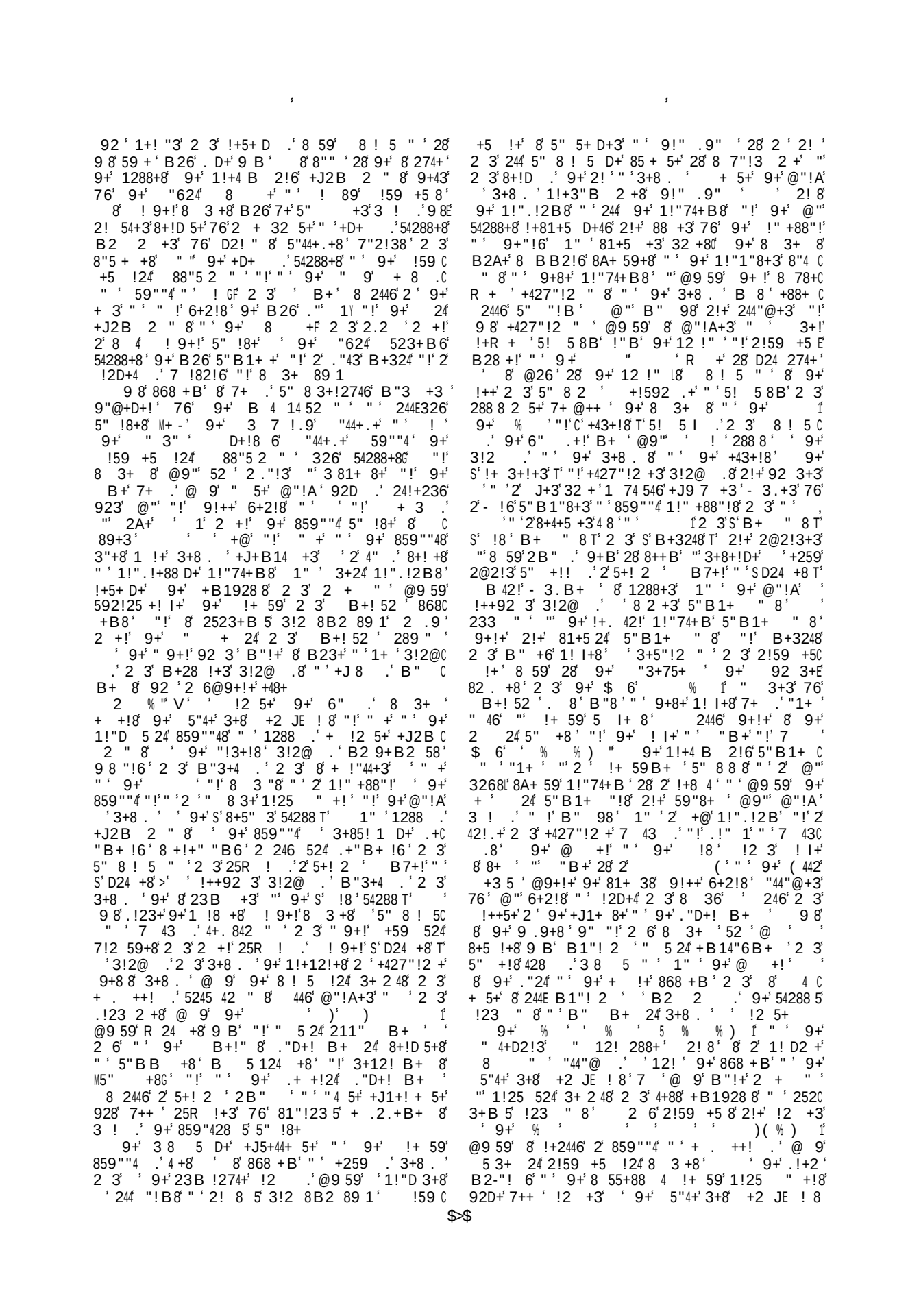

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' 9+' B2-"! 6' " ' 4 +! 52 ' 859""48' " ' 2!59 C +5 !+' 2' B"3 52 " ' " ' 9+' !+ 59' 868 +B' 1!+D2 48' 9+' 8 3+ ' 1288+8' +J2B 2 " 8' "!' 23B 88 " ' 211!"J B2 +46' +R D24+ ' "' 9"8+' "!' 23B 88 " ' "' 9+' ' "!' 5"44+.+' 5" !8+' 2 3' 1 !8 +8' "!' " !' 6+2!8' 2' 5 !! 5 4 B' @9 59' 5"B7 +8' 4+5 !+' 5" !8+8' 2 3' !+5 2 " 8' ' 9+' B2 9+B2 58 ' 85 + 5+' 9+"!6 ' 2 3' 9 8 "!6' " ' 9+' 2! ' @ 9' 3!2 .E!"" B' @"!A' " ' 1!"7C 4+B8' ' 3+8 . ' 2 3' ' !++92 3' 3!2@ .' 9+' 54288!"" B' 5" !8+8' 5"D+!' B2 9+B2 58' 9!" .9' 9+' 5245 4 8' B+592 58' .!219 524' 8 2 58' 2 3' 8 !+ . 9' " ' B2 +! 248F 8923+8' 2 3' 8923"@8' 1+!81+5 D+' 3+85! 1 D+' .+"B+ !6' 2 3' 8 +!+" E' "B 6F' 9+' 9 8 "!6' " ' 2!59 +5 !+F 9+' 9+' "!6' " ' 3+8 . ' 2 3' 3+5"!2 " F 81+5 52 " 8' 7 43C .' 5" 8 ! 5 " ' 2 3' 5" !25 8' 2 3' ' B2 6' 528+8' 1968 58' 59+B 8 !6' 7" 2 6' 2 3' .+"4".6' 96.+ +' 2 3' 82 2 " ' !+ 59' 2 3' +!B2 ' 9+' @"!A' ' 3+8 . ' 8' .+ +!2446' 12 +! +3' 2 +!' 9+' !+ 59' ' 9+' "!B' " ' 2 3' 9+' 1!".!2B' 2 3' 9+' A 3' " ' 1!+8+ 2 " ' 2 3' 3!2 8B2 89 1' !+C R !+3F 2 3' ' 8+D+!24' 528+8' 9+' 1!" +88"!' " ' 3+8 . ' 8' 2' !+ 59B2 ' ' ' " 46' " +' 859""4' 92 ' " +' " ' 9 8' 859""4' 9+!+' 2!+' 9!++' +259' @ 9' 8' "@ ' 8 1+!D 8"!' "!' 8 1+!D 8"!8 ' 1!"D 3C .' 9+' 8 B 4 8' " ' ! + 346' +B 42 " ' @ 9 ' 9+' 859""4' @9 59' 9+' 8 .4+' ' 868 +B' 425A8' 2 3' @9 59' 8' 8"' B1"! 2 ' 2 ' +4+B+ ' ' 9+' 8 55+88' " ' 9+' 2! 8' 868 +B ' ' 2!D2!3' D+!8 6' B " " 6' 2 3' 2!!"@ +88' " ' +259C .' 2!+' 2D" 3+3' 76' ! 8 .' 9+' 1!+12!2 "

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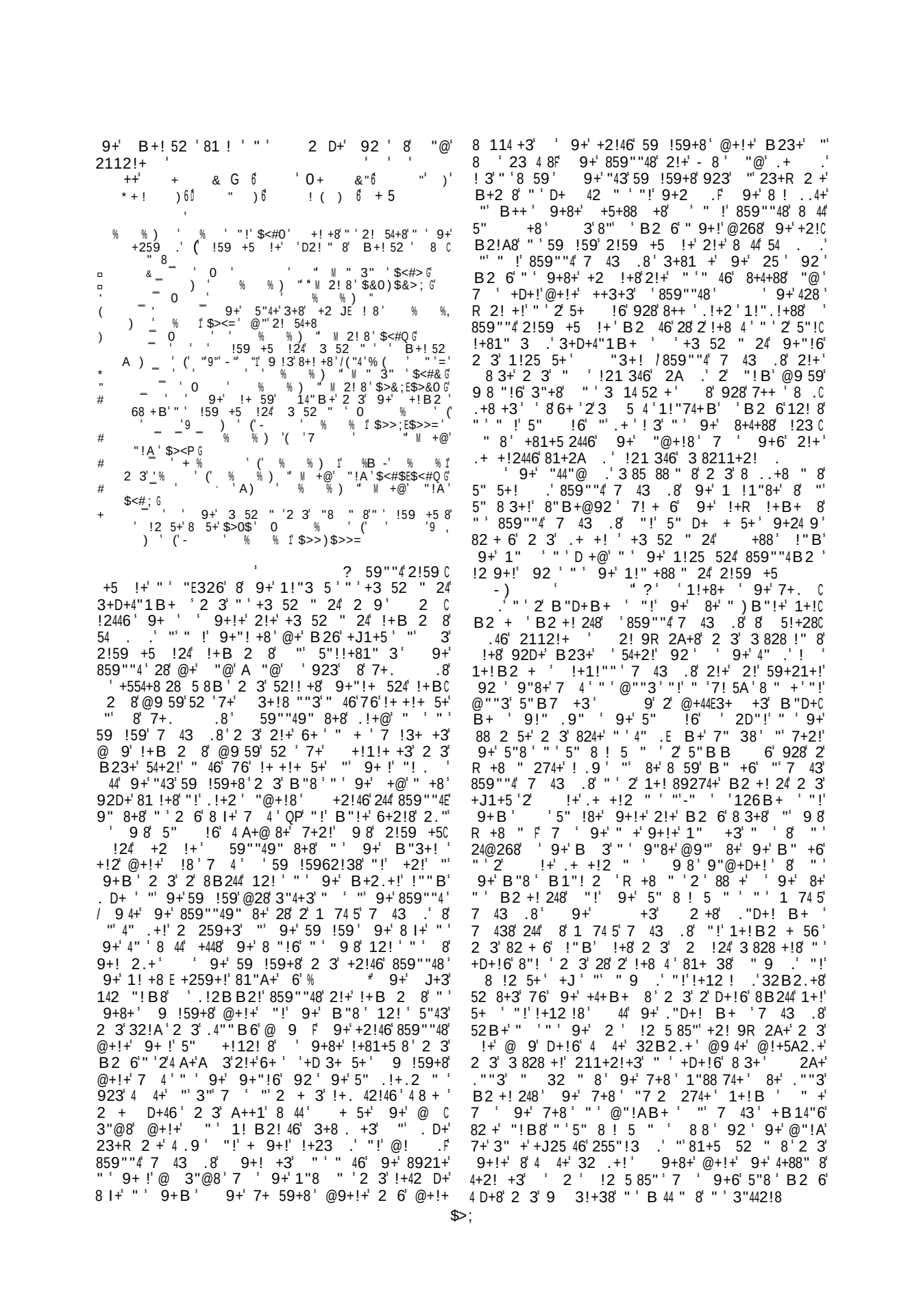
+2!46' 2 ' 9+' 859""48' !+R !+' 2' .!23 2 .' 9+8 8' 3+8 . ' " '8"B+' B1"! 2 5+' "B+' 859""48' !+R !+' 8 B B+!' D252 " ' @"!A' "4 B7 2' !+C R !+8' +D+!6' 8 3+ ' "' 3"' 2 ' 4+28 ' " +' B" 9L8' " 5+' @"!A' 2 3' " +' 3+8 . ' ' +259' 8 B B+!' D252 "

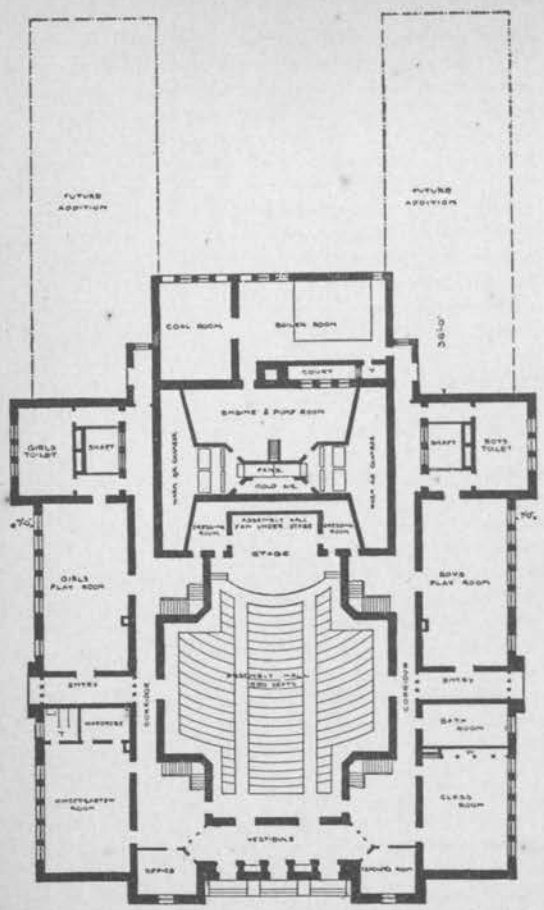
+D+!24' " ' 9+' 859""48' " +!' "!' 5"B1+ " ' 2B" .' 9+ !' .!23 2 +8' 1! I+' 859"42!89 18' "!' "!+ . ' !2D+4' 2 3' 8 36 ' " ' 46' 9+' @ +!8' " ' 9+8+' 7 ' B2 6' " 9+!8 ' .!23 2 +8' "!' 8 3+ 8' @9"' 92D+' 81+ ' @"' "!' 9!++' 6+2!8' ' 2 ' B+! C 52 ' 859""4' @ 9" ' .!23 2 . ' 3+D" +' !" B' @"' "' " !' "!' +D+ ' D+' "!' 8 J' 6+2!8' "' 8 36' ' 2! 8' 2 ' 9+' 5"4+' " + ' @ 9' 2' D +@' "' @ .' 9+' ')) " 9 8' 8++B8' "' 7+' 2' @28 + 4' 5" !8+0' 2 +!' " !' 6+2!8' ' 9+' B+! 52 ' 859""4' @"' 6+2!8' ' 2! 8' ?' " ' +5+882! 46' 28' 2' !+. 8 +!+3' 8 3+ ' ' 9+' 5"4+' ?' 89" 43' 8 5+' "!' 25R ! .' 9+' 7+8 ' 12! ' " ' 9+' !+ 59' !2 .' ?' 9+' !+ 59' 5! 5 8B' + D !" B+ ' 2 3' B2 +!' " ' 2 25A' 2 3' 8 36' " ' 1!"74+B8' ' 3+8 . ' ?' 2 3' 2' 6+2!' "!' @"' " ' !2D+4' ' 246' 2 3' " 9+!' !"1+2 ' 5+ +!8' " ' 2! ' "' 8 36' 9+' .!+2 ' B" B+ 8' " ' 2!59 +5 !+' 89" 43' 8 1146' 9+' ! 9+!' 5 4 !+' 2 3' "!B2 " ' B"8 ' ++3+3' 76' 9+' B+! 52 ' 1!25 " +!

5+' !2 .' 2 3' +J1+! + 5+' ' 9+' 1!+12C !2 " ' " ' @"!A .' 3!2@ .8' 2 3' ' 9+' C B+!274+' 3+ 2 48' " ' 5" 8 ! 5 " ' 2 3' 8 1+! C + 3+ 5+' 2!+' 8 246' 25R !+3' 76' 9+' B+! 52 ' 8 3+ ' 2 +!' 4+2D .' 9+' 859""4 ' 46' 2' 8B 244' 12! ' " ' 9 8' !2 .' 52 ' 7+' 23D2 2.+" 846' 1!"D 3+3' ' 2' 859""4' 2 3' 9 8' 8' 2 !46' @+44' . D+ ' ' 9+' 42!.+!' 859""48' ' 9+' +3' 2 +8' 2 3' 2 232 ' '8"B+' 528+8' 9+' 8 3+ ' + +!8' 9+' 859""4' 2 +!' 2' 6+2!' "!' @"' " ' " 5+' +J1+! C + 5+' 2 3' B2 6' 859""48' 23B ' " 5+' 3!2 8B+ ' 28' 81+5 24' "!' " B2 ! 5 42 +3' 8 3+ 8' "8 ' " ' 9+' 859""48' 5" +!' " ' 9+ !' .!23 2 +8' 9+' 3+.!++' " ' 259+4"!' " ' 5 + 5+F @"' "!' 9!++' 92 ' " ' 259+4"!' " ' !59 +5 !+' "4 B7 2' C D+!8 6' . D+8' 9+' 3+.!++' " ' 259+4"!' " ' !59 C +5 !+' " 46' "' 8 3+ 8' @9"' + +!' @ 9' @"' 5"B14+ +' 6+2!8' " ' 5"44+. 2 +' "!' 85 + 5' 859""4' 8 36' "' 9+ !' 5!+3 F 2' !" +88 " 24' +! 52 +' 8' . D+ ' "' .!23 2 +8' @9"' 92D+' + +!+3' @ 9' " 46' 2' 8+5" 32!6' 859""4' !2 .

9+' + 3+ 56' ' 9+' +3' 2 +8' 8' "@2!3' 2' 5" 8 2 46' 9 .9+!' 2 3' B"!+' +J25 .' !2 .' "!' 9+' 2!59 +5 ' 2 3' 9+' 1!" +88 " ' 8' 5"B .' B"!+' 2 3' B"!+' "' 9+' 92 38' " ' 9 .946' +3 C 52 +3' 1!25 " +!8' !"72746' 9+' @+2A+8' +2 !+' " ' 9+' B+! 52 ' 859""48' 8' ' 9+ !' "4C 4"@ .' !+ 59' 2523+B 5' B"3+48' "' 54"8+46' ' 3+8 . ' 2 3' 3!2 8B2 89 1F 7 ' 9+!+' 8' 4 4+' 3" 7 ' 92 ' B+' @ 44' 7! .' .!+2 +!' 3+1+ 3+ 5+' 2 3' 2' 9+24 96' "! . 24 6' B"!+' ' 255"!3' @ 9



ARCHITECTURE



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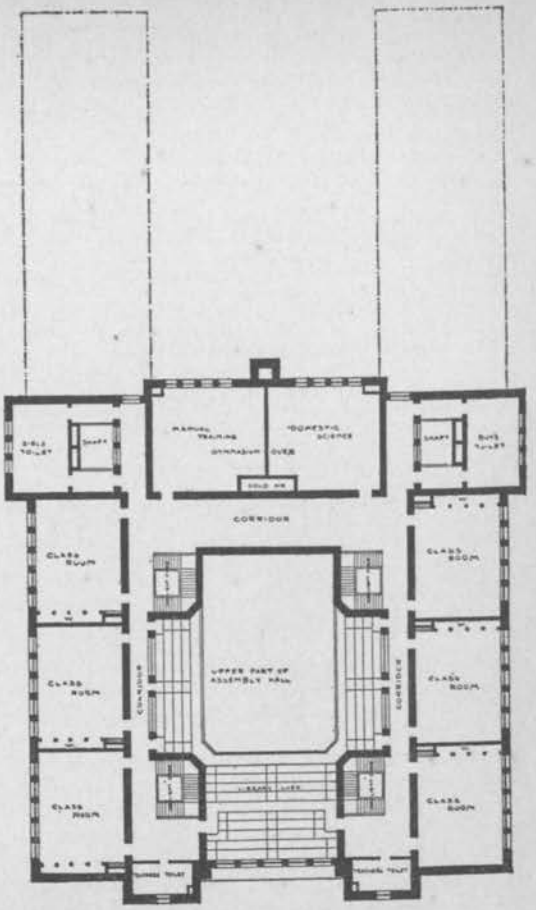
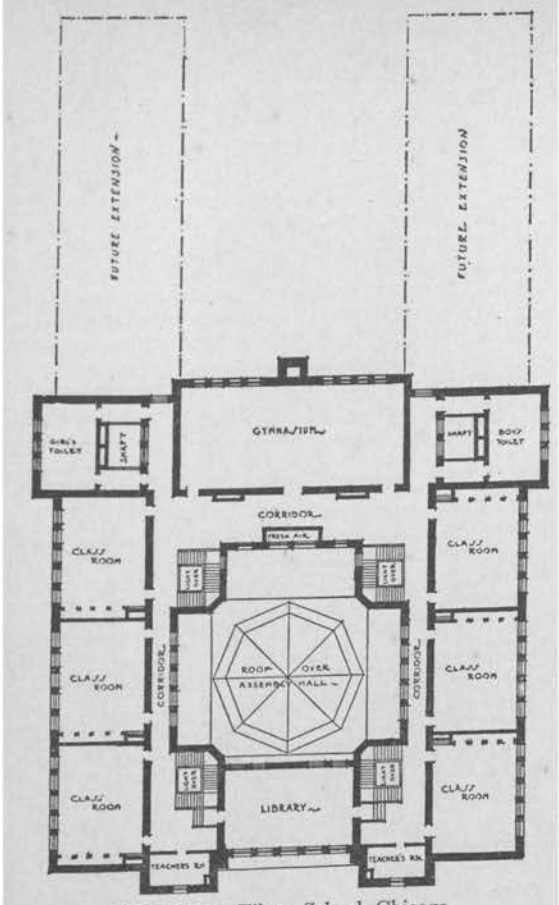


Second Floor—Tilton School, Chicago.

Well-built wooden schoolhouses on good foundations, those which reach down to bed rock, or undisturbed solid clay, will stand earthquake shocks, but are always in danger of being destroyed by fire. They are expensive to keep in good condition and not infrequently are allowed to look untidy for lack of paint, or needed repairs. They are hot in summer and cold in winter, even under the best methods of construction. A very large percentage of them are in time consumed by fire, and this percentage is probably as high now as at any other time, for laboratories and electric wiring have added fuel to the flame. It seems probable that that period in the hurried and rapid development when there was neither time nor money to build more permanent buildings has nearly passed away. There has been a sudden burst into the age of cement and steel construction, and this gives promise of safer and saner use of public money for school buildings. A few years' more experience in working with cement and steel framing will make it possible to insist on fireproof construction for all large or even medium-sized school buildings. There can be no doubt that even now where the burden of a mortgage is placed on future citizens to help to pay for the construction and equipment of school buildings, this is the only just and safe thing to do. Brick buildings set on dampproofed concrete foundations are durable if the bricks are well made and the mortar of high grade. But brick buildings when unsupported by steel frames are readily broken in earthquakes, become very damp in rainy weather or in a moist climate, and are sufficiently porous to allow strong winds to drive air through the walls. It is possible, of course, to treat brick walls with waterproofing materials so as to largely eliminate the effects of driving rains and strong currents of winds; but the general lack of knowledge in the use of such materials and the expense thus incurred operate to prevent much from being done in this direction. When the best bricks are used, put together by high-grade workmen, with cement mortar, and waterproofing material is applied, brick buildings cost nearly as much as reinforced concrete. Stone buildings are generally more expensive than those using any other kind of material because of the difficulty of getting durable stone and the expense of preparing and of handling such



Third Floor, Tilton School, Chicago.

material. It seems then that the most promising material for use in school buildings is reenforced concrete. Such buildings are readily made safe from fires, storms, and earthquakes, are warm in winter, cool in summer, and when carefully constructed are free from moisture and the troubles caused by cold winds. They will last indefinitely and become stronger with age. They will soon save their cost in reduced insurance, fuel bills, and the expense incident to repairs. It seems entirely probable in view of such methods as Mr. Robert Aiken (see "Monolithic Concrete Wall Buildings — Methods, Construction, and Cost," *Proceedings of the National Association of Cement Users*, 1909, pp. 83 ff.), Edison, and others are using, that it will not be long until reënforced concrete buildings will cost less than first-class wooden construction, and that brick and stone will be used much less extensively than at present. In those communities where workmen have learned to handle concrete, even under present conditions, it seems that a thoroughly well-built wooden building or a brick building made of first-class materials throughout and built by skilled workmen is nearly or quite as expensive as one well built of reënforced concrete. (Cf. Knapp, "The Construction and Cost of Small Concrete Houses," *Proc. Nat. Ass'n Cement Users*, 1909, pp. 204 ff.) The growing simplicity in the outward form of modern school buildings suggests a type which would readily lend itself to the use of the latter material. One present difficulty seems to be that the artist-architect does not yet know how to handle concrete to the best advantage. This is not strange, or to be wondered at in the least. Time will give greater assurance. Finally it must be remembered that wood is increasingly expensive, cement less and less expensive as its manufacture is better understood.

ARCHITECTURE

Types of School Buildings. — From a non-technical architectural point of view, several new types of schoolhouses are in process of development in this country, while at the same time in isolated places older forms are still retained. From a recent critical study of hundreds of school buildings both old and new from all parts of the country, the following suggestions relative to present conditions seem worthy of record: —

1. The old form of schoolhouse bearing an incongruous and impertinent tower is rapidly disappearing, though some new and expensive buildings retain this remnant of ecclesiasticism. These remnants have clung tenaciously, and in many places are very hard to get rid of. Some few modern architects have used small towers on school buildings with good taste, but others are not only wasting the public money by the continuance of such features, but shocking all sense of propriety and at the same time introducing danger without compensation. For towers are dangerous in storms, and in ninety-nine cases out of a hundred are worse than useless at all times.

2. In the old form of school buildings windows were invariably found on three sides of a schoolroom, if it were possible to so place them. This too is passing, and unilateral lighting even in a one-room building will soon be required even by legal enactments. Unilateral lighting has introduced some architectural difficulties which have been hard to overcome, but these are now being mastered, and as a result a new type of construction has developed to meet hygienic requirements in this regard.

3. Until within a very few years one of the most difficult and expensive parts of a large school building was the roof with its heavy timbers and its irregularities of proportion. A new type with a flat roof is making rapid headway, and in the main shows better lines than its predecessor. It is interesting to note that this feature has been adopted from business houses, and to those who can read between the lines it will suggest a significant change in the educational faith of the present.

4. The so-called mission style of architecture is well adapted to small or medium-sized school buildings of one, or even two stories in height,

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& 8 9+!+ "!+ 23D 8274+ 7 43 .8 8 2 6 A 3 " B2 +! 24 "!" 9+ 8 1+!8 ! 5 !+ " 8+ 5" 5!+ + "!" 9+ 728+B+ @2448 " 8+ 9+8+ !B46 2 3 !+ 3+!" 9+B 1!"" 2.2 8 9+ ! 8+ " .!" 3@2 +!" !"B" 9+8 3+8 "!" 9+ .!" 3E7+C 4"@ 9+ @2448

- " ? B"3+! 859""49" 8+8 1!"1C +!46 1425+3 2 3 96. + 52446 5" 8 ! 5 +3 89" 43 92D+ 728+B+ 8 9+ +5+88 6 " 728+B+ !""B "!859""4 7 43 .8 928 3+D+4"1+3 "B++ 9+ 3+B2 38 " B"3+! B+ 9"38 " 9+2 . D+ 42 " 2 3 .+ +!24 82 2 " 9" .9 9+!+ 2!+ "@ B2 6 " 9+!" 8+8 @9 59 9 8 12! " 9+ 859""4 7 43 .8 78+!D+8 9+ 728+B+ " 2 859""4 7 43 .3+8+!D+8 2 .!+2 3+24 " 52!+ 4 142 . "!3+!" !+ 3+!" 7" 9 96. + 5 2 3 8+!D 5+274+ 9+ !8 1425+ 9+ 3+1 9 " 9+ +J52D2 " @ 44 3+1+ 3 " 9+ 2 !+" 9+ 8" 4 "1".!219 524 +2 !+8 " 9+ + .97"!9""3 9+ !+R !+B+ 8 "!2B14+ 4 .9 2 3 9+ 8 !+ 2 3 9+ .9 " 9+ 7 43 . 9+ 7+5"B+8 +5+882!6 "4"52 + 2 859""4 7 43 ." .!" 3 28 4"@"!4"@+!92 92 8 B B+3 2 + D C !" B+ 8+D 3+ 4+88 2 2B14+ 2 3 5"B C 14+ + 868 +B " 3+!E3!2 2.+ 52 7+ !+23 46 5" 8 ! 5 +3 92 2 728+B+ 4""!" B 8 7+ D+!6 4 4+ 2 2 7+4"@ 9+ 8 ! 25+ " 9+ .!" 3 9+ 2 B"!+ "! 2 + 4"52 " 52 7+ 923 @9+!+ 9+ 2 !24 3!2 2.+ 8 2@26 !"B 9+ 7 43 . 8 1+! +5 46 82 + "3!"1 2 728+C B+ 4""!" ;"!= ++ 7+4"@ 9+ 8 ! 25+ " 9+ .!" 3 B+2 @9 4+ 9+ "!B " 5" C 8 ! 5 " @ 1+!B "2B14+ @ 3"@ 8 ! 25+ 5"B14+ + 3!2 2.+ 2 3 82 + 8+@+!5" +5 " 8 9+ 728+B+ !""B 89" 43 7+ 2 4+28 $# ++ 9 .9 9+ 54+2!" "1!"1+!46 255"B B"32 + 9+ 9+2 .2 3 D+ 42 .142 2 3 248"" " 8 !+ \2B14+ 4 .9 !""B 2 3 D+ 42 " 8" + 24B"8 B1+!2 D+ 8B244 7 43 .8" @"" "!" B"!+ 8 "! +8 9+ .9 "3!"1 9+ 728+B+ 4""!" "9+ .!" 3 28 4"@ 28 1+!B 88 74+ "!3+!" .+ ."3 1!"1"! F 7 42!.+ 7 43 .8 9 8 8 " +5+882!6 2 3 !+R + 46 23D 8274+ "!9+ 82A+ "1!"1"! " + 5+ 8+D 3+ 92 +259 728+B+ B 8 7+ 142 +3 " 46 "8 9+ 4"52 " 8+4+5 +3 7 248"" " B++ 9+ !+R !+B+ 8 " 1!"1"! " 9+ 8 1+!8 ! 5 !+ 3+!" 8"B+ 5" 3 " 8 UB 59 !+4 + !"B @92 @" 43 " 9+!@ 8+ !+8 4 C 82 8 25 "!6 1!"1"! " 52 7+ "7 2 +3 76 - 3 5 " 8 8+ " +!!25 .

9+ +J 1425+ 2 728+B+ @9"8+ 4""!4 + 8 ;"!= ++ 7+4"@ 9+ 4+D+4 " 9+ .!" 3 " .9 "92D+ 28 +@ 8"4 3 +!5!"88 @2448 28 82 + 6 " 5" 8 ! 5 " 2 3 3 +1! D256"!8"42 " " 9+ D2! " 8 5" D+ + 5+8 @ 44 1+!B 2 6 B+8 1 +!8 2 3 7+2B8 "!2!59+8 B26 2A+ 9+ 1425+ "8"4 3 8 11"! .5!"88 @2448 9+!+76 . DC .11"! 6 "!7+ +!4 .9 .7+ +!D+ C 42 " 2 3 7+ +! .+ +!24 82 2 " 728+C B+ 59"11+3 1 "32!A 2 3 24B"8 255+88 C 74+!""B8 8 4 A+46 "7+ 9" " 46 82 2!6 7 D+!6 92 36 2 3 5" D+ + 8 +88+ C 24 92 728+B+ 8 !+5+ D+ 27 32 5+" 4 .9 2 3 !"B 2 6 2 3 +D+!6 R 2! +!1"88 74+ 2 3 .9+6 ++3 28 B 59 3 !+5 8 89 + 28 52 7+ 23B +3 9+ R +8 " " 9+ 4"52 " 2 3 8 I+ " 728+B+ @ 3"@8 8 2 B2 +! " .!+2 B1"! 2 5+ 7" 9 "!" 9+ 82A+ " 8 !+ .9 2 3 82 2 " 9+ 8 24 32 .+!" 5"B+8 !"B B2A .9+ @ 3"@8 "" 8B244 2 3 9 8 76 !+28" " 9+ +! +!+ 5+ " 9 5A @2448 " 46 2 4 B +3 2B " " 3 !+5 8 89 + 52 + +! 9+ 4""!8 " 728+B+ 8 89" 43 7+ B1+!D " 8 "".!" 3 2 ! 2 3 28 !++ !"B B" 8 !+ 28 1"88 C 74+ 928 7++ " 3 92 2 9 5A 8 !" . 728+" 5+B+ 52!+ 446 4+D+4+3 2 3 9"!" .946 8+ 8 5"2 +3 @ 9 2 ."" 3 426+!" 92!3 281924E B +D+ 46 2114 +3 @ 44 ! 89 .""3 1!"C +5 " 2.2 8 9+ ! 8+ " .!" 3 2 ! 9+ 3 5 4 +8 @ 9 9+ 8+ " 281924 B 2!+ 92 278"!78 B 59 " 9+ 4 .9 2 3 8 4 + 5+3 76 !+ "!9+2 27" 9+ ! 25+8 9+ 2 728+B+ 8 9"!" .946 2 3 82 +46 . 2!3+3 !"B 9+ .!" 3 @2 +!76 82 8 25 "!6 3+!C 3!2 2.+ B 59 .!" 3 2 ! 92 @" 43 1!+88 "!+ !2 5+ 9!" .9 2 728+B+ 4""!" @" 43 +8C 521+ 9!" .9 8 59 3!2 8 2 3 9+ 1"!" 8 8" 4 244 27" 9+ 3!2 8 2 3 9+ 5+ 3+!+ 9+8+ 5" 3 " 8 2 8"4 3 @+44E 89+3 5+B+ 4""!" 8 + !+46 82 8 25 "!6 9 8 9"@+D+!" 46 " 5" 3 " 92 9+ 4""!8 27"D+ 2!+ D+!6 .9 2 3 81+5 24 D+ 42 .8 25A8 4+23 !"B 9+ 728+B+ "+!2 !27"D+ 9+ 7 43 .

9+ @2448 " 2 728+B+ 89" 43 7+ 4 +3 @ 9 @9 + + 2B+4+3 7! 5A "!@9 + .42I+3 +2! 9+ 4+8 9+8+ . D+ 2 54+2 8 ! 25+ 278"!7 4 .9 2!+ +28 46 A+1 54+2 2 3 2!+ 24 ".+ 9+!255+1 274+ 8B244 B+3 BC 8 I+3 859""4 7 43 .8 9+ 728+B+ " +!8 " 9+ @9"4+ 9+ 7+8 4"52 " "!42 ! +8 2 3 ! 248 9+!+ 2!+ 8"B+ "7-+5 " 8 "4"52 . 9+8+ +5+88 +8 2 728+B+ 7 @9+ 3 + 1!+52 " 8 2!+ 2A+ "8+5 !+ ."3 4 .9 . "3 2 3 82 + D+ 42 " 2 3 82 8 25 "!6 14 B7 . 9 8 4"52 " 928 1!"D+3 82 8 25 "!6 +81+5 2446 "!. !2B B2! 859""48 42!.+ 7 43 .8 "! 7" 9 +4+B+ 2!6 2 3 9 .9 859""48 233 " 24 1!"D 8 " 8 "!42 ! +8 B 8 7+ B23+ " 9+ B2 4""!8 9 8 B+ 9"3 82D+8 B+ 1!+D+ 8 5" .+8 " " 8 2 !@268 2 3 92448 2 3 @ 9 ."" 3 142 .1+!B 8 " 1! D256 2 3 82 + D+ 42 "

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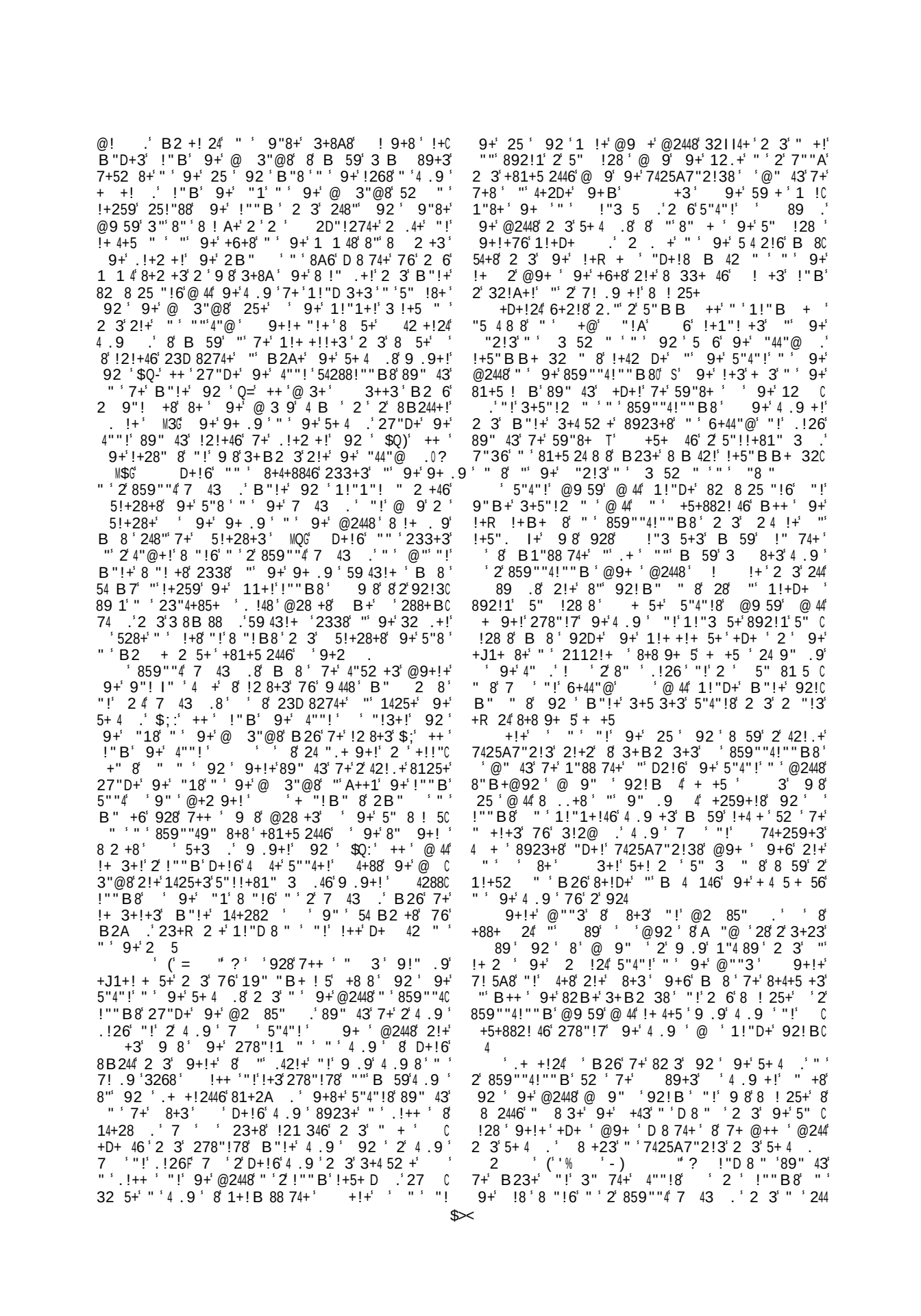
3 8 !72 5+8 !"B 8 59 @"!A 92 @9+ 3" + 2 6 9+!12! " 2 7 43 .
8 8 . .+8 +3 27"D+ @9+!+ 2 9+2 . 868 +B 8 8 244+3 "!2 8 .4+7 43 . @9+ 9+!2 9" 2 ! ! 25+ 8 +2B "!9" @2 +!5" 48 2!+ 8+3 9+7+8 1425+ "4"52 + 9+ ! 25+8 "!7" 4+!8 8 9+ 728+B+ 9 8 B+ 9"3 8 "44"@+3 24B"8 D+!82446 +J5+1 @9+!+ .!" 18 " 7 43 .8 2!+ 8 5 + 46 +2!+259 " 9+!8"= 92 " + 5+ !24 8 +2B "!9" @2 +! 142 52 7+ B23+ "8 1146 244" " 9+ D2! " 8 7 43 .8 44 B259 +!6 "!1 !1"8+8" 14+ B D+ 42C " 2!+ 7+8 1425+3 9+ 728+B+ " " 9+ 7 43 . 9+6 2!+ 3+8 . +3 "8+!D+ + 5+ 244 9+!+R !+B+ 8 ++3+3 B 8 7+ @!" .9 " 9+142 8 "!2 728+B+ 7+ "!+5" 8 ! 5C " 7+. 8 9 8 1" 8 +5+882!6 "B+ C " 7+52 8+ B2 6 2!59 +5 8 . D+ 2! 4+88 8 36 "9+ 728+B+ 142 8 92 9+6 3+8+!D+ 2 3 @9+ 9+ B+ 5"B+8 "!1425 . 2 8 D+ C 42 . 3 5 8 2 3 9+2 . 2112!2 8 8+! " 8 2 3 24B"8 8 1+!274+ 3 5 4 +8 2!+ !+C R + 46 + 5" +!+3 . 2 8B244 "!2D+!C 2.+ 8 I+3 859""4 7 43 .8 9+ 728+B+ 2 "!38 2 ."" 3 4"52 " "!89"@+!72 98 9 8 4"52C " 7! .8 9+B +2! 9+ B"8 5" D+ + 8" !5+8 "!9+2 . 9+ @2 +! 2 3 !+ 3+!8 9+ !+R 8 + 14 B7 . 8 B14+! 2 3 9+ 5+ 4+88 +J1+ 8 D+ 42!.+ 9 .9 859""48 72 98 52 7+ B"!+5" D+ + 46 3 8 ! 7 +3 "9+ D2! " 8 4""!8 2A . "255" 244 " 9+ 27"D+ 8 . .+8 " 8 ?2 3 B2 6" 9+!8@ 44 7+ "7D " 8 ? 3"+8 " 8++B 9+ 4+28 2 +J2. .+!2 " 826 92 9+ 728+B+ 8 " !" !B"3+! 859""4 7 43 .8 2!+ +88+ 24 2 3 +5+882!6 +4+B+ 8 859""4 2!59 +5 !+ 2 3 3+8+!D+ B"8 9" .9 C 4 5" 8 3+!2 " + "?9+ 44 859""4 7 43 .8 28 8 2 +3 +48+@9+!+ 89" 43 7+ 4"52 +3 " .!" 3 9 .9+! 92 92 9+ B B+3 2 + .97"!9""3 2 3 9+ 3+!E3!2 +3 8"= 92 9+!+ @ 44 + 9+! 7+ 2 6 1!+88 !+ " @2 +! !"B 7+4"@ 9+ 4""! " 9+ 728+B+ "!1" 9+ " 32 " @2448 4+88 9 8 8 3" + 8 24B"8 2 B1"88 7 4 6 !2 6 @+2 9+! "1!+D+ @2 +! !"B 7!+2AC .9!" .9 2 5+B+ 4""!" "! 2 4+28 !"B A++1 .9+ 728+B+ @2448 2 3 4""!8 32B1 2 3 5"43 2 3 248"= "1!+D+ 9+ +!2 5+ " .!" 3 2 ! 2 244 B+8 + +!2446 81+2A . 8 " +J1+ 8 D+ 9"!" .946 "3!2 9+ .!" 3 27" 2 859""4 7 43 . "! 9+ @"!A 3"+8 " " + !+R !+ 8A 44+3 42!7"! 2 3 5"B C B" +2! 9+ 4+8 8 59 28 2!B+!8 8+ 3+!C 3!2 .9+ ! 42 3 2!+ 1+ +5 46 82 8 25 "!6 "! 9 8 1 !1"8+ 9 8 3!2 9"@+D+! B 8 92D+ 2 .""3 !++" 4+ " .9 "7+42 3 " 244 8 3+8 " 9+7 43 .27" &+ " 8 3+ 9+ " 32 " @2448 2 3 @+44 7+4"@ 9+4+D+4 " 9+ "" ." "! 9+ @2448 9 8 142 8 "44"@+3 9+!+ 8 "++3 "! 3!2 8 3+! 2 6 12! 9+ 7 43 . 9"8+ 3 !+5 46 5" +5 +3 @ 9 8+@+!8 89" 43 7+ 1425+3 " 9+" 8 3+ @9+ +D+! \1"88 74+ 8 " 5" !8+ +88+ 24 "! 4+ 3!2 8 "!+B2 5+B+ +3 2 9+ -" 8 "!3+! 92 9+ .!" 3 @2 +! B26 + +! 2 3 +8521+ 9!" .9 9+B 8 248"= 2 ++34+88 +J0 1+ 8+ "= 44 9+ +J52D2 " "! 9 8 3!2 @ 9 5"2!8+ .!2D+4 "! 7!"A+ 8 " + "! 9+ @2 +! + +! . 9+ 4+8 8 244 "!+2!46 244 "!5+3 1 !"B 7+4"@ 8 @+44 9"@+D+! "= 5"D+! 9+8+ 4+8 @ 9 2 +@ 59+8 " 5"2!8+ .!2D+4 "! 7!"A+ 8 " + +81+5 2446 9+8" 4 8 82 36 "= 1!+D+ 2 6 8+3 B+ !"B 4 +! . 9!" .9 9+ -" 8 9+ !+8 " 9+ 3 59 52 7+ 44+3 @ 9 9+ +2! 9 2A+ !"B 44 +2D+ 81" 8 89" 43 +!B 2 + 2 9+ .!" 3 4 + 8+@+! 4+8 52!+ 446 5+B+ +3 ".+ 9+!8"= 92 244 9+ @2 +! 89+3 !"B 9+ !"" @" 43 7+ 52!! +3 2@26 !"B 9+ 7 43 . 9 8 8 " 3" + @ 44 7+ 24B"8 B1"88 74+ "= 1!+D+ @2 +!E 8"2A+3 728+B+ @2448 2 3 9+ !" 74+8 5 C 3+ 9+!+ " "?9+ 54288!""B 928 7++ ! .9 46 5244+3 9+ "2 859""4 7 43 . 44 " 9+!12! 8 " 9+ 7 43 .2!+ 8 78 3 2!6 "= 9 8 9+ 8 I+ 8921+ 2 3 5" 8 ! 5 " " 2 54288!""B 2!+ 9+!+ "!+ B2 +!8 " 1! B2!6 B1"! 2 5+ + "!+ 2 6 3+ +142 8 52 7+ 3!2@ "!2 859""4 7 43 . 9+ B7+!7 8 I+ 2 3 "!B " 9+8+ 8 B 8 7+ 3+ +!B +3 "!+4+B+ 2!6 859""48 8 .+ +!2446 5" C 5+3+3 92 2 !""B ;Q ++ 4" . Q= ++ @ 3+ 2 3 $Q) ++ 9 .9 9+ 54+2! 211!"J B2 +8 9+ 3 B+ 8 " 8 3+B2 3+3 76 2 B"3+! +4+B+ 2!6 54288!""B 9+ "44"@ .!+28" 8 2!+ . D+ "!9+8+ 3 B+ 8 " 80 ?
M"G "= 59 43 89" 43 7+ 2 2 .!+2 +! 3 8 2 5+ 92 ;# ++ !"B 9+7425A7"2!3 2 9+ +259+!LB + 3 " 9+ !""B 9 8 3+B2 3 2! 8+8 !"B 9+ 25 92 2 59 43 8 ! 9+!+!+B"D+3 !"B 9 8 7"2!3 B2A+8 3 5 4 "!5 9 B !+23 46 2 3 +28 46 "= 8++ 9+ @! + 3 !+5 " 8 1425+3 9+!+" 76 9+ +259+!
M&G "B+ 59 43!+ 3 3 5 4 "= 9+2! @92 9+ +259+!8268 +D+ @9+ 81+2A . 54+2!46 2 3 @ 9 .""3 " +8 @9+ 9+6 2!+ B"!+ 92 Q> "!;# ++ !"B 9+!5 9+ 3 5 4 6 8 8 44 B"!+2112!+ @9+ 2 +259+!9 28 2 @+2A D" 5+F 2 3 9+ R 24 6 " 9+!D" 5+ 928 "= .!+2 52!!6 .1"@+! 8 D+!6 !+C 8"B+ "!2 6 " + "8 ! D+ "78 + 2 3 8 5+ 59 43!+ 2 !2446 9+2! +88 255 !2 +46 92 23 4 8 2 3 +!1!+ @92 9+6 9+2! B"!+ 84"@46 9+ B1"! 2 5+ " 9 8 !+R !+B+ 8 8 44 B"!+ 2112!+ 23 81+44 . 2 4 6 1!"C 5 2 " 8 2 3 B 8 3+!8 2 3 .8 2!+ " + 3 + "= 9+ 27 4 6 " 59 43!+ "= 9+2! @+44 + 5+ 9+ 8 I+ " 9+ 54288!""B B 8 7+ 23C - 8 +3 "1!+D+ 9+8+ !" 74+8 9+ 2 . 2! 8 . !"B 9+ 8 !2 " !6 . "= 9+2! 8 " 46 2 "6 . 2 3 @28 + 4 " + +!.6 7 8 9+ 8" !5+ " 52!+4+88 2 + M5G 9+ @ 3 9 " 2 54288!""B 89" 43 +D+! 7+ B"!+ 92 @ 5+ 9+ 9+ .9 " 9+ "1 " 9+ @ 3"@8 !"B 9+ 4""! 9 8 !+R !+B+ 8 +5+882!6 " 255" " 9+ 25 92 9+ ! 9+! !"B 9+ @ 3"@8 2 59 43 8 8+2 +3 9+ 4+88 2D"!274+ 8 9+ 4 .9 B"B+ 8 9" .9 @ 44 8 5+ "B2A+ 54+2! "2 6 " + 92 9+ 2B" " 4 .9 92 @ 44 244 " 9+ 7""A8 "!



" 9+!' 8 "! +8' 4+88' !+1!"" ' 5" 8 ! 5 " ' 8' 8+3 ' " 74+' 4""!8' 2!+' +5+882!6' "!' 8+D+!24' !+28" 8' 7 ' 59 + 46' "' 1!+D+ ' 9+' + !2 5+' " ' 5"43' B1 !+' 2 !' "!5+3' !"B' 9+' .!" 3' 9!" .9' 9+' .!+2 +!' 1!+88 !+' " ' 9+' 2 !' " 8 3+' 9+' 7 43C .' 2 3' "' B2A+' ' 1"88 74+' "' !+ 3+!' " +' 54288C !"" B' !++' !"B' 9+' 3 8 !72 5+8' 52 8+3' 76' " 8+' ' 2 " 9+!' +' " ' 9+' B"8 ' 5"B B" ' 5"B142 8' 9+2!3' !"B' +259+!8' 2 3' 1 1 48' ' 5"43' @+2 9+!' 2! 8+8' !"B' 9+' +D+ ' 3 8 ! 7 C " ' " ' 9+2 ' ' 9+' 54288!""B ' ' !"" B' ' @9 59' 9+' 9+!B"B+ +!' @ 4' !+. 8 +!' 0#!' '=' ++ ' !"B' 9+' 4""!' ' 9+' B 3334+' " ' 9+' !"" B ' 2 3' &;!' ' 2 ' 9+' 4""!' 4 +' B B+3 2 +46' 7+4"@ ' 52 C " ' 7+' 2' 9+24 9 4' "!' 14+282 ' !"" B' ' @9 59' "' @"!A' ' 5"43' @+2 9+!' 92 ' 9 8' 8' " ' 2 ' B2. 2!6' 8 2 " ' @ 4' 7+' D" 59+3' "!' 76' 2' .!+2 ' B 4 3+' " ' +259+!8' ' " !' 5" !6 ' +259+!8' @9"' 92D+' "' B"D+' 27" ' B 59' ' 9+' !"" B' 3' +D+ ' 2' .!+2 +!' 3 85!+12 56' 92 ' 8' 9+!+'8 ..+8 +3 ' '2'4+D+4' P' ++ '27"D+' 9+' 4""!' 9+' 3 +!+ 5+' B26' 7+' B"!+' B2!A+3 ' 59' +D+ +88' " ' +B1+!2 !+' @ 4' 52 8+' 3 8 !C 72 5+8' '5 !5 42 " ' 2 3' 9+8+' 2!+' "!+! +!8' " ' 5"438 ' +8 3+8' 9+23259+8 ' 9+' "11!+88 D+' ++4 .8' " ' @"!A .' ' 2' 9 .9' +B1+!2 !+' @ 4' 24@268' 7+' ' +D 3+ 5+' 4""!8' 9+!+ "!+' B 8 ' 7+' 8"' 52!+ 446' 5" 8 ! 5 +3' 92 ' 5"43' 2 !' !"B' 7+4"@' 52 " ' 3' + !2 5+' ' 244' 7 43 .8' @9+!+' 9 8' 4"@' 8' " ' 1!+D+ +3' 76' !+1!"" C .' B2 +! 24' 3" 74+' 4""!8' B 8 ' 7+' 3+B2 3+3 ' 9+' !8 ' "!' 4"@+!' 426+!' " ' 8 59' 2' 3" 74+' 4""!' 52 ' 7+' B23+' " ' " ' 2 6' 8"!' " ' +D+ 46' 82@ ' !" .9' 3!6' B7+!' 9+' -" 8 8' 89" 43' 7+' .9 ' 2 3' 9+' 7"2!38' 42 3' 3"@ ' 3 2." 2446' "' 9+' -" 8 8 ' + @++ ' 9 8' 2 3' 9+' " +!' 4""!' 9+!+' 89" 43' 7+' 2' ."" 3' 3+23+ +!' @9 59' @ 4' 2 ' 9+' 82B+' B+' 7+' B1+!B+274+' "' 9+' 4"@' " ' 5"43' 2 !' ' ."" 3' R 24 6' " ' 9+2D6' 287+8 "8' R 4 ' @ 4' 8+!D+' 9 8' 3" 74+' 1 !1"8+' 2 3' ' 928' 9+' 233+3' 23D2 2.+' " ' 7+ .' " 42B B274+' 9+' S' 27" ' +23+ .' _ 4 'T' B23+' " ' 5! 88C 5!"88' 426+!8' " ' ++4' .!288' 8_ 59+3' 7+ @++ ' @"' 426+!8' " ' 121+!' 8' 2' ."" 3' 3+23+ +!' 2 3' ' 8' 542 B+3' @ ' 1!+D+ ' 9+' + !2 5+' " ' .!" 3' 2 !' 8' 5" 8 ! 5 " ' 8++B8' "' 7+' 8 59' 28' "' @2!!2 ' 8' 8+' "!' 9 8' 1 !1"8+' ' 8' 5+!C 2 46' 2' 82 8 25 "!6' 3+23+ +!' " ' " 46' "!' 4""!8' 7 ' "!' 12! " 8 9+' B2 +! 24' "' 7+' 8+3' "!' 9+' 4""!' 1!"1+!' 8' 2' B2 +!' " ' 1! B+' B1"! 2 5+' "!' "' " 9+!' 12! ' " ' 2' 859""4' 7 43 .' 8' 8 7-+5 +3' "' 8 59' !" .9' 82.+' 28' 9+' 4""!8' " ' 54288!""B8' 2 3' " +' 928' B"!+' "' 3"' @ 9' 9+' .+ +!24' 82 2!6' 5" 3 " ' "!' 211+2!2 5+' " ' 9+' 859""4!""B ' ""3' "2A' 4""!8' B23+' " ' ;E 59' 7"2!38' " . +3' 2 3' .!""D+3' 2 3' 28 + +3' @ 9' 5 ' 2 48' 2!+' 9+' 7+8 F 7 ' 8 59' 4 B7+!' 928' 7+5"B+' +J1+ 8 D+' 2 3' ' B2 6' 528+8' 9+' 1! 5+' 8' 1!"9 7 D+' 2!3' B214+' B2A+8' ."" 3' 4""!8' 2A+8' 2' ."" 3' 1"4 89' 7 ' 8' 8" +!' 92 ' "2A' 2 3' 89"@8' 9+' 3+ 8' " ' 9++4' 25A8' 2!3' 8 !2 .9 E.!2 +3' 1 +' Q ' "' ;' 59+8' @ 3+' 2 3' 42 3' 28' 8 ..+8 +3' 27"D+' 8' 4+88' +J1+ 8 D+' 2 3' B2A+8' 2' 82 8 25 "!6' 4""!' ' @9+ ' 1 +' 8' 8+3' 8"B+' 5"B1+ +

B2 ' @ 9' R +8 " +3' 2 9"! 6' " .9 ' "' 81+5 '+D+!6' 7"2!3' '"!3+!' "' 1!+D+ ' 9+' 8+' " ' 2' 8 .4+' 1 +5+' 89"@ .' S' 84289'X' .!2 ' "!' 1 59' .289+8 ' ' 92D+' 8++ ' 4""!8' 24B"8 ' ! +3' 76' 9+' 8+' " ' 2' +@' 8 59' 7"2!38 ' "!' 9+6' @ 44' 814 +!' 2 3' 44' 1' @ 9' 3 ! ' ' 81 +' " ' 244' 2' 52!+ 2A+!' 52 ' 3"' ' @" 43' 7+' 2 ' +J5+44+ ' 1!+52 " ' "' 92D+' 2' 81+5 24' 8 1+!D 8"!' +BC 14"6+3' @9+ ' 2 6' A 3' " ' B2 +! 24' 8' 8+3' ' 426 .' 4""!8 ' "!' B+! 52 ' @"!AB+ ' 2!+' 1!"C D+!7 2446' 52!+4+88 ' 2 3' 72 +!+3' 4""!8' @ 44' +D 2746' !+8 4 ' 4+88' D ."!" 8' "D+!8 .9 ' 2 3' R +8 " +3' 2 9"! 6' 2!+' 9+!+' "' 1!+D+ ' +!' 2' 4""!' 928' 7++ ' 42 3' 2 3' 244' 9+' !+8 ' " ' 9+' @"!A" ' 9+' !"" B' 5"B14+ +3 ' 89" 43' 7+' 142 +3' "!' 82 3121+!+3' "' 2' 8B"" 9 ' +D+ ' 8 !C 25+ ' 2 3' !+2 +3' 8"' 28' "' !+5+ D+' 2 3' 9"43' 2' @2J' 89 ' 9+' S' 3 8 4+88' " 4' T' 3!+88 .' B 59' ' +D 3+ 5+' 9+8+' 3268' 89" 43' 7+' 4 B +3' "' 9"8+' !"" B8' 3+8 . +3' "!' 9+' 4"@+!' .!23+8' " ' 9+' +4+B+ 2!6' 859""48 ' 9+ ' 1 ' " ' 4 .9 46 ' ' 8' + +5 D+' ' 1!+D+ .' 3 8 ' !"B' ! 8 .' ' @9+ ' 9+' 4""!8' 2!+' 8@+1 '2 3' ' 9 8' ' 8+!D+8' 2' D+) ' 8+ 4' 1 !1"8+' ' @9+ ' 1 ' " ' "" 9+2D 46 ' ' ! 8' 9+' 8A ! 8' " ' 9+' +259+!' 2 3' ' 8+3' ' 9+' !""B8' "!' 9+' 11+!' .!23+8' "!' 9 .9' 859""48 ' '52 8+8' B 59' !" 74+' 76' 8" 4 .' 9+' 8A ! 8' " ' 9+' 42!.+!' . !48 ' 9+ ' 8+3 ' 9+' B"8 ' 5"B1+ + ' 2 3' 52!+ 4'-2 "!' " .9 ' "' 7+' 3+ 2 4+3' "' 21146' ' +259+!8' 52 ' ' 2' B+28C !+' 1!" +5 ' 9+ !' 54" 9 .' !"B' 92!B' 76' 9+' 8+' " ' ! .8 ' 7 ' 9 8' 8' B1!25 5274+' "!' 9+' 42!.+!' . !48 ' 9+!+' S' 3 8 4+88' " 4' T' 3!+88 .' T' 8' " ' 8+3 ' 2' ."" 3' 4""!' @2J' 89" 43' 7+' 2114 +3' 2 3' 9+' 4""!8' 24@268' 8@+1 ' @ 9' 2' 7+!' 7! 89' 2 +!' 852 +! .' 2' +@' 92 3 48' " ' 32B1' 82@C 3 8 '"!' 85!218' " '32B1+ +3' 121+!' "D+!' 9+' 4""!' !6' 8@++1 .' 8' 2 ' 27"B 2 " ' 2 3' +2 9+!' 3 8 +!8' 89" 43' 7+' 72 89+3' !"B' 9+' 859""4' 7 43 .8

' 9+' +2!' !+' 244' 859""4!""B8' @ 44' 7+' 54+2 +3' 76' 8"B+' "!B' " ' 8 5 " ' 2 3' 9+' !" 74+' 2 3' 32 .+!' !"B' 3 8 ' @ ' 7+' D+!6' .!+2 46' !+3 5+3 ' ' +@' 7 43 .8" .9 ' "' 7+' 5" 8 ! 5 +3' @ 9' 9 8' ' D +@ + ? 44' 3""!8' '859""4' 7 43 .8' 89" 43' "1+ ' " @2!3' ' "!3+!' "' !+3 5+' 9+' 32 .+!8' !"B' !+8' "8 ' 8 2 +8' !+R !+' 9 8' 76' 42@' 44' " 8 3+' 3""!8' 89" 43' 7+' 3" 74+' 2 3' 8"' 5" 8 ! 5 +3' 28' "' 54"8+' ".+ 9+!' ' 9+' B 3334+' @ 9" ' 9+' ++3' " ' 2' 1+!B2 + ' 1! .9 ' 8"' 92 ' @9+ ' 7" 9' 2!+' "1+ +3' 9+!+' @ 44' 7+' "' "78 ! 5 " ' 4+ ' 9+!+' 2!+' 8+D+!24' 12 + ' 28 + .8' "@' " ' 9+' B2!A+ ' @9 59' !+ 3+!' 9+' 3""!8' 8+5 !+' !"B' @ 9" ' 7 ' +28 46' "1+ +3' !"B' @ 9 ' 9+8+' 2!+' 5" D+ + ' 2 3' 2!+' +88+ 24' "!' 82 + 6' ' 5 +8' ' 8' 24B"8 ' +5+8C 82!6' "' A++1' 9+' B2 ' 3""!8' " ' 2' 859""4' 7 43 .' 4"5A+3' 3 ! .' 9+' 859""4' 8+88 " ' ' "!3+!' "' 1!+D+ ' 1 4 +! .' 76' 9"8+' @9"' 2!+' " ' 2 + 3C .' 859""4' 7 ' @9"' B26' !+23 46' 76' " +' +J5 8+' "!' 2 " 9+!' +J142 ' 9+ !' 1!+8+ 5+' ' 2' 7 43 . ' 6' 9+' 8+' " ' 9+' 28 + .8' !+ +!!+3' "' 9+!+' 8' "' 233+3' 32 .+!' ' 9 8' 4"5A .' 9+' 3""!8' "!' 9+6' 2!+' " ' 4"5A+3' !"B' @ 9 ' 2 3' 2' +@

1" 38 1!+88 !+ @ 44 "1+ 9+B 9+ 3""!8 !"B 9+ 54288!""B8 "" 92 48 89" 43 7+ 142 @ 9" 12 +48 "! .4288 2 +4+3 3""!8 82. 89! A 2 3 52 59 3 8 9+6 2!+ " 8"8 !" . 28 142 D+ ++!+3 3""!8 @9 59 2!+ 5" 8 ! 5 +3 76 D+ ++! .'" 7" 9 8 3+8 " 2 8"4 3 728+ B23+ " 2 6 8 !" .4 .9 @""3 @+44 8+28" +3 " . +3 2 3 .!""D+3 .4 +3 2 3 8+ ".+ 9+! @ 9 9+ .!2 ! .' 12!244+4 @ 9 9+ 4""! 9+ D+ ++! .' B2 +! 24 @ 44 7+ 8+ @ 9 9+ .!2 D+! 524 "9+ 4""! 2 3 52 7+ 8+4+5 +3 "B2 59 9+ 89 9+ 54288!""B8 2 3 92448 59 2 5" 8 ! 5 " . D+8 2 8 !" .4 .9 E@+ .9 3""! @9 59 @ 44 " 82. . D+8 "4+3.+8 "!3 8 2 3 @9+ 9+ 92!3@2!+ 8 1425+ B2A+8 2 B"!+ 7+2 4 3""! 92 9+ 8 "5A 3""!8 +D+!6@9+!+ +D 3+ 5+ 59 3""!8 2!+ " 9+ B2!A+ 2 3 2!+ 7+ .' 8+3 8"B+" 9+ 7+8 859""4 7 43 .8 9+ 5" !6 9+!+ 8 "+3 " 2 8"E5244+3 52!1+ 8 ! 1 3+!' 8 3+ 3""!8 859""4 7 43 .8 2 3 9+ !' 8+ " .9 "7+ 3 85" +3 9+6 52 59 2 3 9"43 9+ 3 ! B2A+ 3 5 4 "8@++1 9+ 4""! 52 8+ 59 4C 3!+ 8 B74+ 2 3 .+ +!24 2!+ "1425+ "9+ "7-+5 " !.+3 92 9+6 2!+ +5+882!6 "1!+D+ 9+ 3""!' !"B 3!2.. .' 9+ 4""! B26 7+ !+14 +3 92 @9+ 9+ 4""!8 2!+ 4+D+4 9+ 3""!'-2B78 D+! 524 2 3 9+ 3""!8 8+ " 8 !" .'8"4 3 9 .+8 9+!+ 8 "3 5 4 6 9+ 3""!' " .9 "7+ 8+ "54+2!' 9+ 4""!" 46 9+ !25 " " 2 59

8 7+ +!' "8+ 54288!""B8 3""!8 @ 9" .4288 8+ 9+B 2 3 @ 9" !2 C 8"B8 "D+!' 9+B 5528 " 2446 @9+!+ 92448 @" 43 7+ 32!A @ 9" 9+ 4 .9 !"3 5+3 9!" .9 !2 8"B8 2 3 .4288 9+ 3""!8 8 +5+882!6 "54 3+ 9+8+ 9+ 5" 8 ! 5 " 7 @9+!+ 92448 2!+ @ 3+ 2 3 1!"1+!46 4 .9 +3 8 7+ +!' "+4 B 2 + 244 .4288 !"B 3""!8 9+ !+28" 8 "!' 9 8 !+5"B B+ 32 " 2!+ 9+8+0 9+ 4+3.+8 !"3 5+3 76 9+ 8+! " " !2 C 8"B8 52 59 3 8 2 3 9+ .4288 8 !2!+46 A+1 54+2 +8 3+8 8 59 "1+ .8 !"3 5+3 C 5 4 +8 @9+!+ B+592 524 B+2 8 "!' D+ 42 " 2!+ +B14"6+3 14+ B D+ 42 " 9+!+ @ 44 7+ 2 4+2A2.+ " 2 !2!" 3 2 !2 8"B @9 59 @ 44 "1+!2 + "!+3 5+ 9+ 1!+88 !+ ++3+3 "3! D+ 9+ " 4 2 !" 9!" .9 9+ +J 3 5 8 4288!""B8 89" 43 7+ 1! D2 + 2 3 9+ 5+ .4288 3""!8 8+3 2 244 89" 43 7+ .!" 3"!' " C !2 812!+ 9+ .4288 8 8+! +3 9+ 3""!8 " 859""4!""B8 9+!+ 8 24@268 32 .+!" 7!+2A .' "!' 59 43!+ 52 " 7+ +J1+5 +3 "7+ 28 52!+ 4 28 23 4 8 D+ 9 .9 859""4 7 43 .8 @9+!+ 3""!8 2!+ +3 @ 9 2 12 +4 .4288 9+ +J1+ 8+ !"B 7!+2A2.+ 8 " 2 8B244 +B " "" B+ " 9+ 32 .+! B14 +3 d ; "? 9+7+8 2!!2 .+B+ 9 8 2! B23+ "!' 54"2A!""B8 7 43 .8 3+8 . +3 "! .!2B B2!' 859""48 5" 8 8 8 5 .' "2 8125+ 27" P ++ @ 3+ " 9+ +259+!!8 + 3 " 9+ !""B 1"88 74+ 2 3 5"B B 52 .' @ 9 9+ !""B' 76 @"3""!8 7 92D .' "3 !+5 5"BC B 52 " '@ 9 9+ 9244 9+ 44 8 !2 " '89"@ 9+ "44"@ .' . !+ @ 44 B2A+ 9 8 142 54+2!

"52 " " +8A8 2 3 4"2A!""B "! !2BB2!' 59""4

59 2 2!!2 .+B+)D+8 9+ +259+!5"BC 14+ +5" !"4" 9+ 54"2A!""B 1!+D+ 8 1 4 +!C .' !"B 2 6 " + " 8 3+ 9+ !""B 1!+D+ 8 5" 8 " 92448 2 3 B2A+8 1"88 74+ "D+ 42 + 9+ 54"2A!""B 9+!+76 A++1 .' 9+ 2 !1 !+ 27" 244 2! 54+8 " 54" 9 .F 1!+54 3C .' 9+ 1"88 7 4 6 " 9+ + !2 5+ " " 4 2 !" B 8 59 2 !""B "8 9+ 54288!""B 2 3 "3!6 @+ 54" 9 . @ 44 7+ 8++ 76 !+ +!+ 5+ "9+ 142 92 2 42!.+ @ 3"@ 8 2!!2 .+3 "4 .9 9+ 54"2A!""B 2 3 92 9+ 3""!8 8@ .' "@2!3 "9+ 54288!""B "1+ C .' 9+ 4"@+!12! " +259 3""!' 89" 43 7+ B23+ 9!" .9 @9 59 "3! D+ 9+ 2 !' +J 3 5 89" 43 7+ 2!!2 .+3 8" 28 "1+ 27"D+ 9+ @!218 2 3 9+ 5+ "9+ .+ +!24 +J 868 +B 27"D+

8 852!5+46 +5+882!6 "3 85 88 9+ 8"! " 9""A8 "8+ 8 59 2 !""B 7 B .9 7+ @+44 "826 92 9+!+ 2!+ 9""A8 "@ " 9+ B2!A+ @9 59 2!+ B 59 B"!+ 82 8 25 "!6 92 9+ "43 8 64+ " 89"! 9""A8 9+8+ 2!+ 8" 2!!2 .+3 92 9+ 54" 9 .' 8 " 1 4+3 "C .+ 9+!' 8 59 2 9+21 9+!+76 1!" +5 .'92 8 2 3 . D .' 7+ +!' "11"! 6 "!' D+ 42 " 9+8+ 2!+ 23D+! 8+3 B2 6 " 9+ 5 !!+ 859""4 -" ! 248 +' " 9+ 3 5 4 +8 5"BC B" "859""48 28 " 9+!' 1 74 5 7 43 .8 8 92 " 52! .' "!@+ B7!+4428 2 3 "D+!89"+8 "!' 9+!+ 2!+ 9 +D+8 859""48 28 @+44 28 " C 8 3+ " 9+B 59 3 5 4 +8 B26 7+ B C B I+3 76 9+ 1!"1+!' 5" 8 ! 5 " " 4"5A+!8 "!' 76 8B244 3 D 3 24 5"B12! B+ 8 @ 9" 4"5A8 "!' 9+ 4"@+!' .!23+8 59 43!+ 52 " 7+ +J1+5 +3 "92 34+ 2 4"5A 2 3 A+6 @ 9" !" 74+ 2 !2446 8"B+ 3! 1 728 "!' !" .9 B 8 7+ 2!!2 .+3 "!' B7!+4428 2 3 8"B+ 1 .+" E9"4+ "!' "D+!89"+8 9 9+8+ BC 7+!+3 "!' 2B+3 9+!+ " .9 "7+ 4 4+ !" 74+ 2 8 5218 2 3 @!218 2!+ " !" 74+8"B+ 76 !+28" " @2!!2 +3 211!"1! 2 " "!' 9+!+ D2! + 6 8 9+ 82 +. 2!3 2 3 9+8+ 2!+ B"!+ 96. + 52 6 1425+3 " "4"5A+!8 @9+!+ 1!"1+!' D+ 42 " 8 B"!+ +28 46 8+5 !+3 7 43C .8 "!' 9+ .!2B B2!' .!23+8 2 5"B B" 54"2AC !""B 8 1+!B 88 74+ @9+!+ "!3+!' 2 3 8+. !+.2C " 9+ 4 +8 8 B2 2 +3 7 9 .9

859""48 8+12!2 +54"2A!""B8 2!+278"4 +46 +5C
+882!6 7 9 8 8+12!2 " !"3 5+8 8"B+
3 5 4 1!"74+B8 9+!+2!+B2 6 9 .9 859""4
7 43 .8 +@2 3 "43 @9 59 1!"D 8 " !"
4"5A+!!""B8 928 7++ B23+ 9+ 728+B+ F
7 9 8 .+ +!24 8 " 23D 8274+ 9+
!8 1425+ 9+!+ 8 2 !++3"B 2 3 2 52!+4+88 +88
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9+ 8+ " 8 59 2 4"52 " "!4"5A+!!""B8
+81+5 2446 @9+ 8 59 !""B8 5"B+ "7+ .2 9+!C
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8 D+!6 3 5 4 "4 .9 2 3 D+ 42 + 8 59
!""B8 1!"1+!46 2 3 A++1 9+B !++!"B 32B1C
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9 !3 1425+ 8 !2!+46 1"88 74+ "B2A+ 728+C
B+ !""B8 28 +2 2 3 2 !25 D+ 28 9+6
89" 43 7+ B23+ +2 @+44E4 .9 +3 @+44E
211" +3 4"5A+!!""B @ 44 5"B B2 3 2 !+81+5
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!2!+46 288"5 2 +3 @ 9 2 32!A 3 82.!++274+" +
9 8 8 2 !+25 " "9 B2 2 !+@9 59 B 8
7+ 5245 42 +3" 2 3 +259+!928 2 ! .9 "
+.4+5 9+ +J 1425+ " 9+! 9 .8
7+ .+R 24 B"!+ 9+ 8 2 3 1 4 +! .8 2!+
288"5 2 +3 @ 9 728+B+ 4"5A+!!""B8 92
9"8+ " 9+ B2 4""!8 9+ !+28" 8 2!+
"7D " 8 9+@9"4+ 9+ 8 @ 8+ "142
4"5A+!!""B8 "! 9 .9 859""4 1 1 48 " 9+
B2 4""!8 59 2 142 8 B"!+ +J1+ 8 D+
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9 8 !+.2!3 "! 42!.+!859""48
8 3+ + 8 74+ "1425+4"5A+!8 9244@268
"! 8+D+!24 !+28" 8 59 + 2B" .@9 59 2!+ 9+
"44"@ .F ?
M$G 9+6 2!+ 8 .9 46 2 3 52 " 7+ D+ C
42 +3 @+44 @ 9" B 59 +J1+ 8+]
MQG 9+6"78 ! 5 9+ 92448 2 3 52 8+ 9+B "
7+5" .+8 +3 8+D+!24 B+8 3 ! .9+ 326
M;G 9+6 .2 9+! 2 B 59 .!+2 +! 2B" " "
3 8 92 @9+ 8 2 +3 54"8+3 !""B8
M=G 59 2 4"52 " 3"+8 " " +! 8 5 +
1! D256 +81+5 2446 "! 9+ .!48
MPG 2448 " +!" +" 9+7+8 "11"! +8 "!
9+ B"8 + +5 D+ 3+5"!2 " " 2 6 12! " 9+
7 43 .8 2 3 4 +!+3 76 4"5A+!8 " 9 .+ +5C
D+ 52 7+ 3" + "B+ 326 9+ +2! !+
B26 7+ 9"1+3 92 1 74 5 859""4 7 43 .8 @ 44
8+!D+ 28 2 5+ D+ "2! 8 8 "3+D+4"1 B !24
12 .9 8 5" !6 2 3 "8+ I+ 1" 9 8
"11"! 6 "B2A+ 9+ ! 3+248 5" " "!B"8
9 8 !+.2!3 9 8 5" !6 8 2!7+9 3 @92
89" 43 7+
M&G 528+" ! 9+1"88 74+2 +B1 " 8"B+
" + "82D+ 54" 9 .""!7""A8 @" 43 + 32 .+!
B2 6 3+ "78 ! 5 +3 92 48 @ 44 8"" 7+
3+B2 3+3 76 4+.842 D+ + 25 B+
9 !+ +!+ 5+ "9+ A 3 "4"5A+!8 "8+
" 24 @"!3 52 7+ 82 3 7 2 +@ +88+ 248
" .9 "7+ 81+5 +3 9+6" .9 "92D+ 82 +
4"5A8 2 3 1"88 74+ 7+ B23+" B+ 24 5" +5 +3
1 @ 9 9+ D+ 42 .868 +B 8" 92 3+!
2 6 !3 2!6 8+ 9+6 @" 43 !+B2 3!6 2 3
1 !+ 9+6" .9 "7+ 1425+3 2.2 8 2 @244
"! 7+ +! 7 4 " 8" 28 " 1!+D+ 2 6
"78 ! 5 " " 4 .9 9+6" .9 "7+ BC
7+!+3 8 59 2 @26 92 " 592 .+@" 43 7+
+5+882!6 "! 1"88 74+ "B7 2 " 4"5A8 82D+
B 59 2 "62 5+ 28 9+ !+8 4 " " 9+ 4"88 "
A+68 7 9+6 8"B+ B+8 !"3 5+ B"!+
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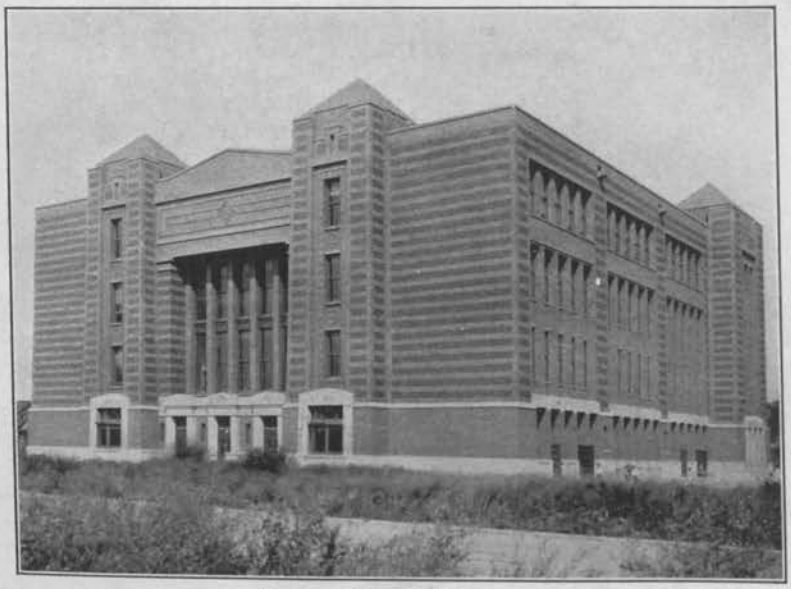
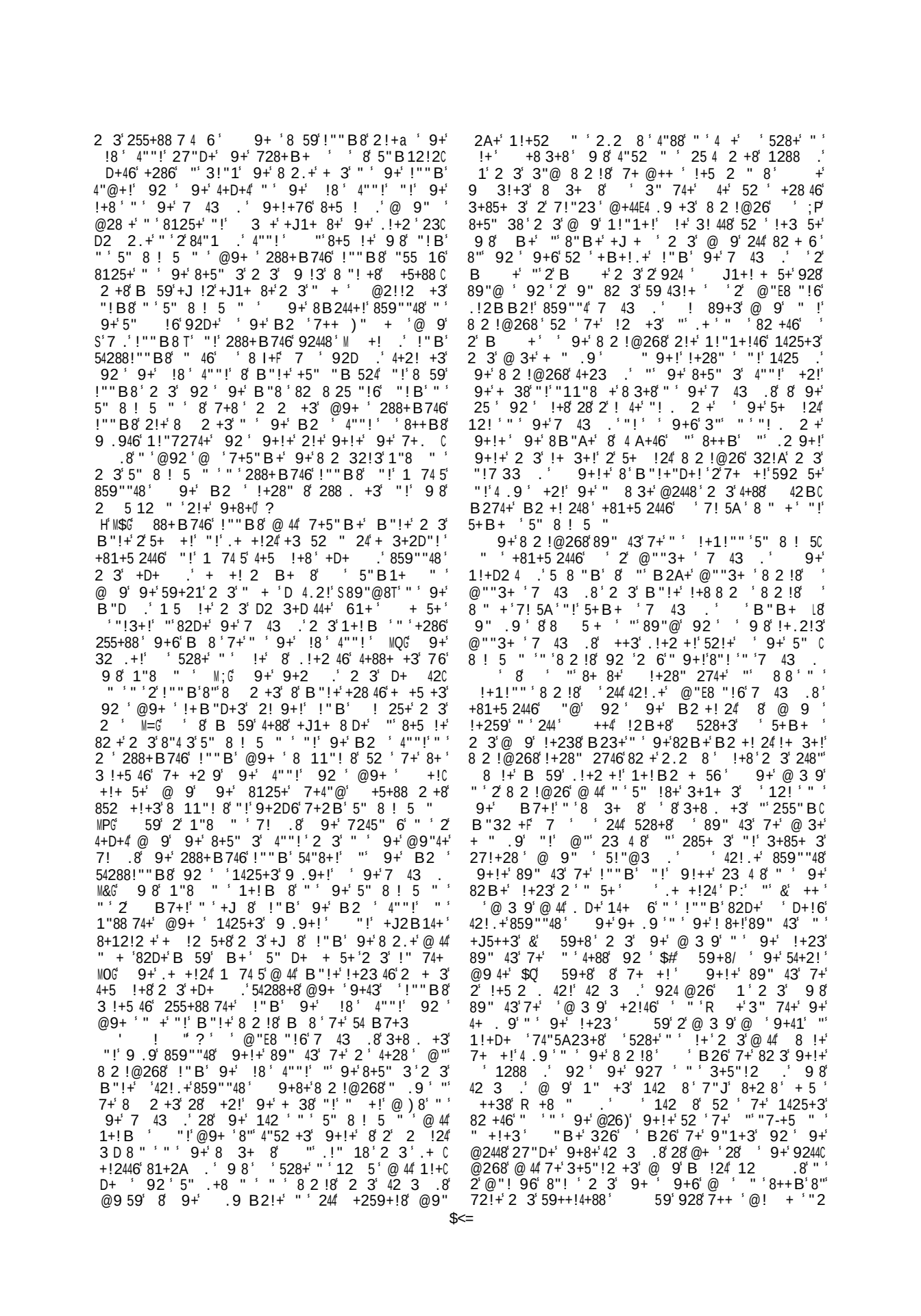
89" 43 7+ 3!+88 .!""B8 +81+5 2446 "! 9+
.!48 2 3 8 59 !""B8 3+8+!D+ 255"B B"32 " 8
" +5+882!6 "81+5 6 9+!+ +2 2 3 28 +C
4 3!+88 .!""B8 2!+D+16 9+41 4 2.+ 5 +8
9+ B2 2.+B+ 2 3 5" !"4 " 1 74 5 859""48
2 3 2!+@"! 96" B"!+2 + " 92 8 8 2446
.D+ " 9+B
/ " ? 9+ 92448 " 859""4 7 43 .8 3+C
8+!D+ 52!+ 4 5" 8 3+!2 " "!1+!9218 "
" 9+! 12! " 9+859""4 7 43 .28 3+ !"B 9+
288+B746 !""B " +!8 7+ +! "11"! 6 "!
8 9+ 5 !+2 B+ 92 3" 9+92448 2 3 5+!C
2 46 "12! 8 B"!+ 8+3 76 9+ 859""4 28 2
@9"4+ 2448 89" 43 7+ @+44E4 .9 +3 7!"23
2 3 8125 " 8 9 8 5" !6 8 2 5 8 "B
24B"8 D+!824 "1425+ 54288!""B8 " 7" 9
8 3+8 " 2 9244 2 3 4+88 8 59 92448 +J + 3
9!" .9 9+ 7 43 . 9+6 2!+ +D+! @+44E
4 .9 +3 82D+@9+!+ 2 8A64 .9 52 7+ !"3 5+3
2 3 9 8 "11"! 6 8 4 B +3 24B"8 +J54 C
8 D+46 "9+ "1 4""! 2!A 92448 "!B" +"
9+B"8 " 274+ 3+ +5 8 9+2 5" 8 ! 5 " "
B"3+! 7 43 .8 9+ +@+! 61+8 " +!C
B2 859""4 7 43 .8 !2!+46 92D+ 54288!""B8 "
7" 9 8 3+8 " 2 92 2 3 28 2 !+8 4 9+ ! 92448
2!+@+44 4 .9 +3 2 3 " +7+2 446 3+5"12 +3
9+ @ 3 9 " 2 1!"1+!46 5" 8 ! 5 +3 9244@26
@ 12! 3+1+ 3 " 9+ B7+! 2 3 2.+"
9+ 1 1 48 2 + 3 .9+ 859""4 9 .9
859""48 @9+!+ 2 9+ 54"8+ " +259 !+5 2 "
1+! "3 9+!+ 8 2 .+ +!24 592 .+" "!""B8 76 244
8 3+ 8 8 +88+ 24 92 14+ 6 " 8125+ 8
2 "!3+3 "! " 9 .@ 44 7!+2A 3"@ 9+ 3 85 C
14 +2 3 3+5"! B" 2 859""4 B"!+ R 5A46
92 2 .+ +!24 85!2B74+ 2 3 5!"@3 . 9+
92448 3+!9+ "43 5 !! 5 4 B @9+!+ +259
B+B7+!" 2 . D+ 54288 ""A 9+82B+ 5" !8+8
@28 1"88 74+ "! +259+!8 "+J592 .+!""B8
7 8 5+ +4+5 D+ 5" !8+8 92D+ 7++ !"3 5+3
54288+8 2!+ 7!"A+ 1 +259 1+! "3 2 3 928
7+5"B+ +5+882!6 "! 9+ 8 3+ 8 "B2A+
!+. 42! 592 .+8 ! 9+!B"!+ +259 +259+!
42!.+!859""48 8 2 81+5 24 8 2 3 9 8 !""B 8
+R 11+3 @ 9 7""A8 2 3 2112!2 8 8 +3 "
2 81+5 24 4 +" @"!A 8" 92 9+ B 8 !+B2
2 3 9+8 3+ 8 1288 9+B2 9244 " 2 42!.+
9 9 859""4 89" 43 9+!+ "!+ 7+ !"B $= "$
++ @ 3+ @+44 4 .9 +3 !"B 7" 9+ 38 2 3 B 8
5" 2 " ! !+ " 2 6 8"! " "!+"D+!
8 2 @ 8+ 1"4 56 "B2A+ 9+ @2 85" .
" 9+92448 " @9 + 4+8 "!4 .9 E5"4"!+3 .42!+3
7! 5A 9 8 !+2 B+ ! " " 46 8+!D+ ""3
96.+ 5 2 3 2+8 9+ 5 1 !1"8+8 7 @ 44
!+ 3+! 9+ 4 .9 B"!+ + +5 D+ 2 3 .D+ 2
3 . 6 " 2 7 43 .@+44 @"! 9 244 5"8 8
9+ 4""!8 " 92448 2!+D+16 B1"! 2 +4+B+ 8
2 3 3+8+!D+ 81+5 24 2 + " "B+ " 9+
+@+! !+1!"" +3 7 43 .8 8+ 142 92!3

ASSEMBLY ROOM (*AULA*) IN GYMNASIUM AT ZEHLENDORF, GERMANY (SHOWING MURAL DECORATIONS).



TILTON SCHOOL, CHICAGO.



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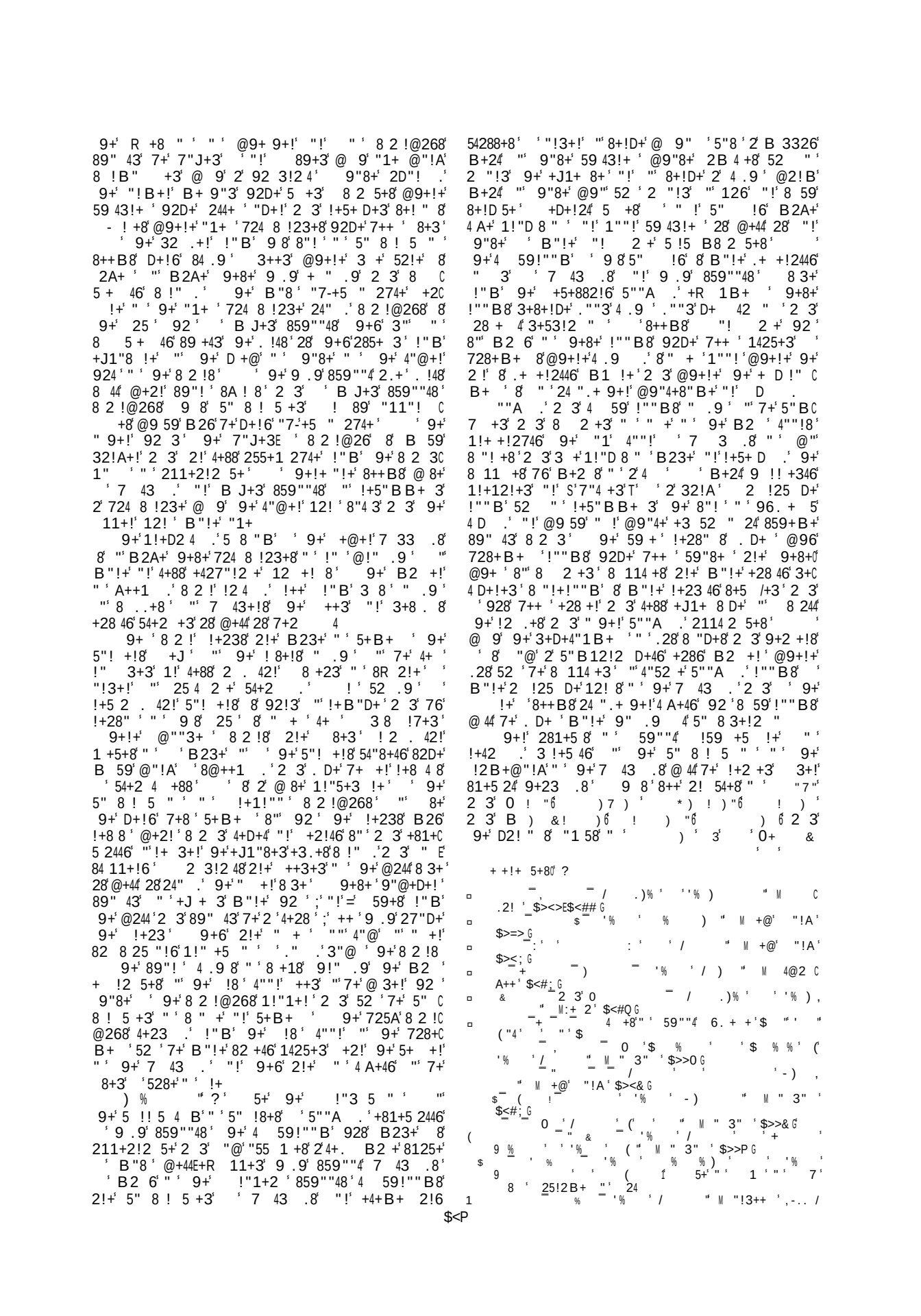
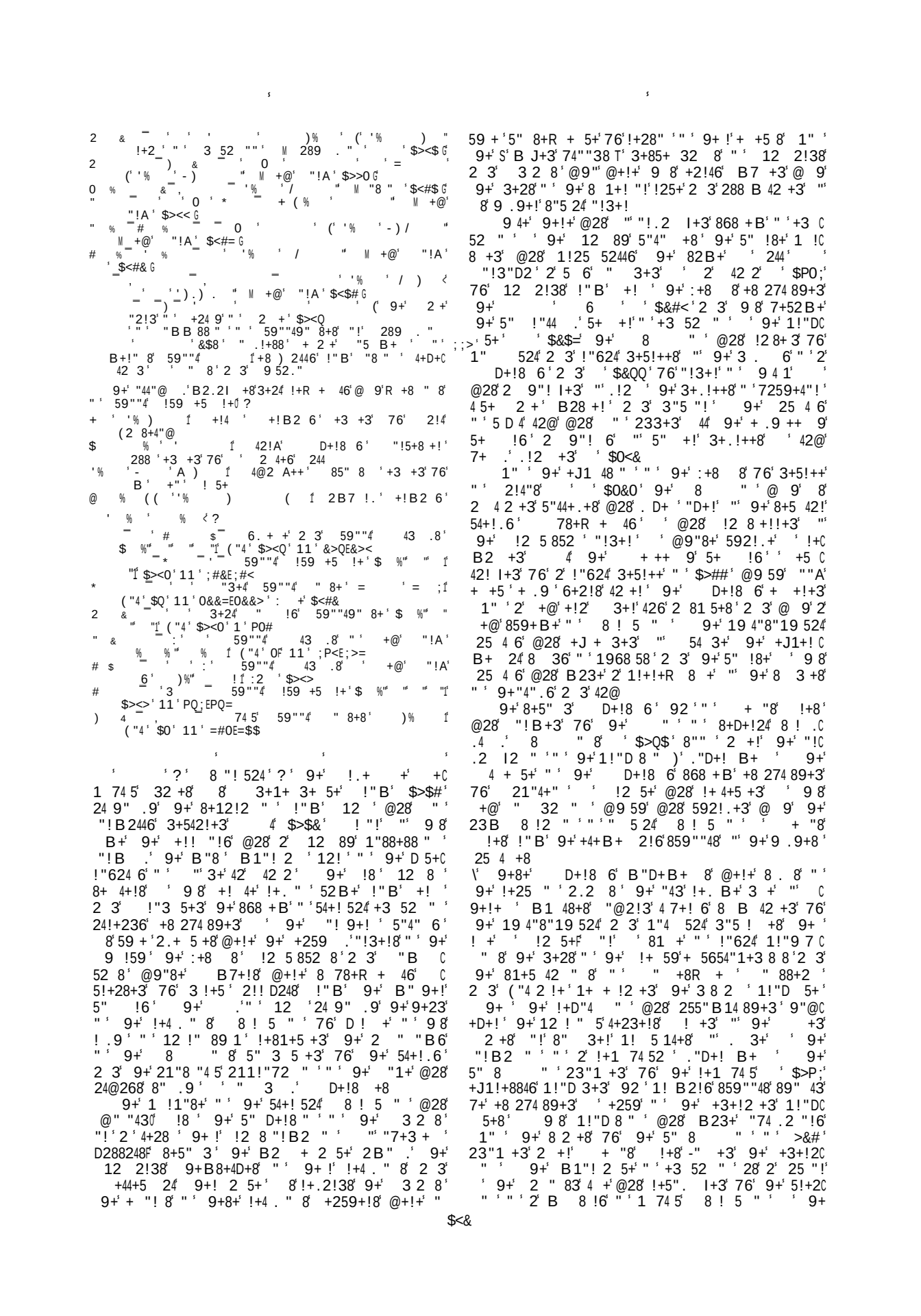




$<&

+@46' "!B+3' ."D+! B+ ' !"B' 9+' +J + ' " ' 9+' 5" !6 ' 9+' 812!8+' 1"1 42 " ' 9+' @2 ' " ' 3+B"5!2 5' !23 " 8 ' 2 3' " ' B B+3 2 +' C 5+ D+8 ' 9+' 52 8+' " ' 1! B2!6' +3 52 " ' 42 C . 89+3 ' +J5+1 .' ' 9+' 521 24' 5 6 ' @9+!+' 9 8' +!+8 ' @28' 3+!' 9+' 3 !+5 ' 5" !"4 " ' 9+' +3+!24' ."D+! B+

9+' D ."!" 8' B "D+B+ ' ' 7+924 ' " ' 1"1 42!' +3 52 " ' @9 59' .2D+' !.+ 2' 9+' 4+23+!89 1' ' 9 8' !+81+5 ' ' " 9' B+! 52' @28' +J5 +3' 76' 9+' + "! 8' " ' !+8 3+ ' "B ."' 2 8 "' 2!B + " ' 2' 1+! "3' " ' +J 4+' 3 ! .' 9 8' !"C B2 5' 52!++! ' ! ' 2!B + "' @28' 5"B B 88 " +3' 76' 9+' 9 4+2 '."D+! B+ ' "' 8 36' 9+' 868 +B8' " ' +3 52 " ' ' 9+' +3' 2 +8' 2 3' !"1+' 9 4+' " ' 9 8' B 88 " ' 9+' "!B+3' B2 +' 25C R 2 2 5+' @ 9' B7"43 ' I" ' "73+ ' 2 3' "!25+' 2 ' 78+R + 46 ' 9+' !+1!+C 8+ +3' 9 8' 5" !6' 28' B 8 +!' 14+ 1" + 2!6' 2 ' 289 . " ' 2 3' !"B' 9 8' B 88 " ' 9+' @28' !+5244+3' ' $>&>' 76' 9 8' +4+5 " ' "' 9+' 1!+8 C 3+ 56' " ' 9 8' 5" !6

B" .' 9+' B+28 !+8' 23D"52 +3' 76' 9 8' +B + ' 8 2 +8B2 ' "!' 9+' 3+D+4"1B+ ' " ' 9+' !+1 74 5 ' 1"1 42!' +3 52 " ' 9+43' 9+' 59 + ' 1425+F @"' +88+ 24' 5" 3 " 8' " ' 2 ' + 5 + ' 868 +B' " ' 1 74 5' 8 ! 5 " ' @+!+' 8+5 !+3' 76' 9 8' 1+!C 8" 24' + "! 8 ' +' .2D+' 2 " 24' 3 !+5 " ' "' 9+' @"!A' 76' B+2 8' " ' 4 7+!24' 211!"1! 2 " 8' !"B' 9+' 1 74 5' !+28 !6' ' 2 3' " ' 859""48' ' 9+' 8+D+!24' 1!"D 5+8' " ' 9+' !+1 74 5 ' 2 3' 2 ' 2!2 3 ' 521 24' " ' 9+' 1!"D 5+' " ' !+' "8 ' 9+' "!.2 C I+3' 2' "!B24' 859""4' " ' B"3+! ' 61+' ' 592!.+' " ' 2' .!" 1' " ' +259+!8' 5244+3' !"B' 9+E +3' 2 +8' "' 288 8 ' ' 9+' + +!1! 8+' 9+' 42@' " ' $>0 ;' 1288+3' - 8 ' 2 ' 9+' 54"8+' " ' 9 8' 1!+8 3+ 24' +!B' 1425+3' 9+' 1"4 56' " ' 2 " 24' 2 3' "!' 1! C B2!6' +3 52 " ' ' 9+' 8+D+!24' 1!"D 5+8' 1" ' 2' 1+!B2 + ' 728 8

' $>>=' + ' 6+2!8' 2 +!' 9+' 54"8+' " ' !+8 3+ ' 2!B + "L8' +!B' 28' 59 + ' +J+5 D+' 9+' 42@' @28' 1288+3' 76' @9 59' 9+' 1!+8+ ' 859""4' 868 +B' 8' !+. 42 +3' 9+' B+28 !+' @28' 2 " 24' ' 85"1+' 7 ' " ' 255" ' " ' 9+' 5" 8 " 24' 3+1+ 3+ 5+' " ' 9+' 8+D+!24' 1!"D 5 +8' ' !+C 81+5 ' "' 9 8' +!+8 ' 8' 3 !+5 ' 2114 52 " ' @28' 4 B +3' "' 9+' 521 24' 5 6' 2 3' 8+5 " 24' +!! C "! +8' 3+!' 9+' B B+3 2 +' 5" !"4' " ' 9+' 2 " 24' ."D+! B+ ' 2 3' "' 859""48' ' 9+' 1!"D 5+8' 892! .' ' 9+' ."D+! B+ ' 8 78 36 ' 9+' 2 " 24' 42@' 928' 8+!D+3 ' 9"@+D+!' "' 7! .' 27" ' 2' 2 !' 3+.!++' " ' "!B 6' ' 9+' 8+D+!24' 1!"D 5 24' 42@8

9+' 3 +!+ 5+' ' 9+ !' 9 8 "! 5' "! . 8' +JC 142 8' 9+' 5" +3' 3 8 5 " ' 7+ @++ ' 9+' @"' 3+12! B+ 8' " ' 9+' .+ +!24' 868 +B' " ' +3 52C " ' ' 9+' !+1 74 5 ' 9+' " +' 5"B1! 8 .' 9+' 1! B2!6' 2 3' "!B24' 859""48 ' 9+' " 9+!' 9+' 5 4 !+' 2 3' 1!" +88 " 24' 859""48' " ' 9+' 5" !6 ' 5"!!+81" 3 .' "' 9+' "43' D+!8 +8' 2 3' 5"4C 4+.+8' +!B+3 2 +' 7+ @++ ' 9+' @"' .!" 18' 2!+' 9+' !+5+ 46' "!.2 I+3' 5"B B+!5 ' 2 3' +59 524' 859""48

!+8+ ' 68 +B8 ' ? ' $ ' '% 1' ? ' 9+' +3+!24' ."D+! B+ ' 23B 8 +!8' 1! B2!6' +3 52C

" ' 9!" .9' 9+' 2 " 24' 7"2!3' " ' +3 52 " ' # ? ' % ' -)% % & @9 59' @28' "!B+3' ' 9+' B 8 !6' " ' +3 52 " ' ' $>>$' 9 8' 7"2!3' 8' 288 8 +3' 76' 2' 7"36' " ' 81+5 "!8 ' @9"' B 8 ' 7+' .!23 2 +8' !"B' 9+' 9 .9+8 ' "!B24' 5" !8+ ' 2 3' B 8 ' 92D+' 923' 8+D+!24' 6+2!8' +JC 1+! + 5+' ' +259 .' ' 9+' 1 74 5' 859""48 ' 9+' 81+5 "!8' D 8 ' 2 3' !+1"! ' 1" ' 244' 859""48' B2 2 +3' 76' 9+' 5+ !24' 2 9"! 6 ' ' 9+' 521 24' 5 6' 9+' 1! B2!6' 859""48' 92D+' 2 2 +3' 2' 2 !' 3+.!++' " ' + 5 + 56 ' 3' 44 8 !2 +' B "8 ' 446' 9+' 1!"D 8 " 8' " ' 9+' 42@' " ' $>>=' 8 ! 5 " ' 8' "74 .2 "!6' "!' 59 43!+ ' &' "' $= 6+2!8' " ' 2.+ ' + 9+!' ' 1 74 5' 859""48' "!' 76' 1! D2 +' 2.+ 5 +8F 1 74 5' 1! B2!6' 859""48' 2!+' .!2 " 8 ' 2 3' 2!+' "!.2 I+3' ' 8 J' " +E6+2!' .!23+8 ' "!' 54288+8 ' 259' 54288' B 8 ' 92D+' 2' B B B' 2 + 32 5+ ' " QP' 1 1 48' ' .!23+8' $ 2 3' QF $P' ' 9+' 9 .9+!' .!23+8 ' "+3 52 " ' 8' 244"@+3' " 46' ' 9+' 9!++' 4"@+!' .!23+8 ' 9+' 5" !8+' " ' 8 36' B 8 ' 5" "!B' "' 2 ' " 5 24' 1!".!2B' 3!2@ ' 1' 76' 2' 8+4+5 ' 5"B B ++' " ' +259+!8 ' 81+5 "!8 ' 2 3' 859""4' 1968 5 2 8 ' 9+' 859""48' 2!+' " C 8+5 2! 2 ' 7 ' 9+' 54+!.6' " ' 9+' 3 +!+ ' 3+C "B 2 " 8' B 26' 7+' 23B +3' "' . D+' !+4 ." 8' 8 ! 5 " ' 7+ "!+' "!' 2 +!' 859""4' 9" !8' 2' 1! D 4+.+' @9 59' 8' 59 + 46' +J+!5 8+3' 76' 9+' 54+!.6' " ' 9+' 8 2 +' 59 !59 ' " ' 9+' "B2 ' 2 9"4 5

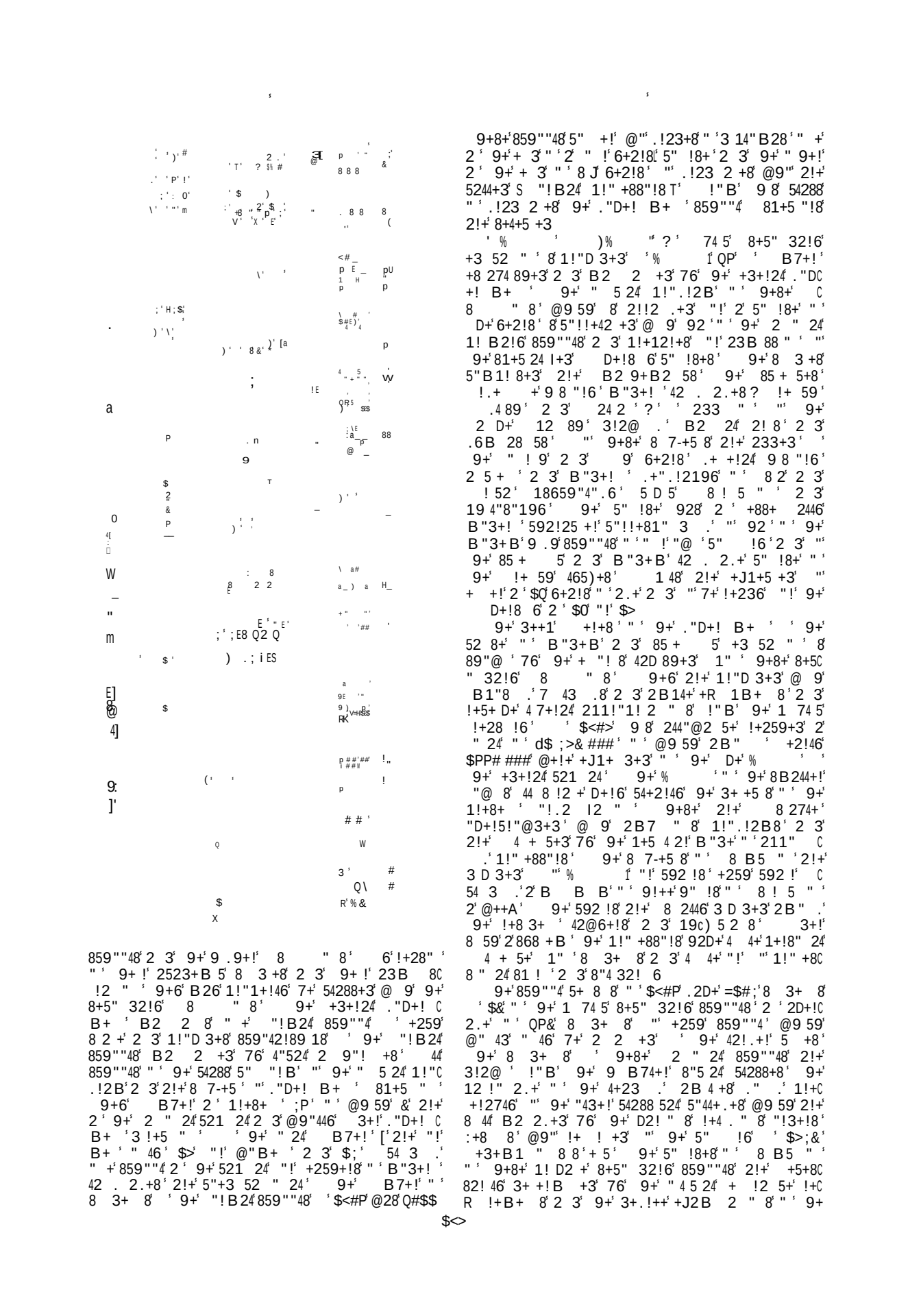
2 3 32 +8' "!' +259+!8!' 1"8 " 8' B 8 ' 7+' 1!"D 3+3' @ 9' 2' 1!" +88 " 24' 3 14"B2 ' 2' 9+24 9' 5+! 52 +' 2 3' 2' 5+! 52 +' " ' 9 .9' B "!24' 592!C 25 +!' 242! +8' 2!+' 2!!2 .+3' ' 9!++' .!23+8 ' 1!"C B" " ' 7+ .' 3+ +!B +3' 76' B+! ' 2 3' 4+ . 9' " ' 8+!D 5+' +259+!8' 92D+' 2' ! .9 ' "' 2' 1+ 8 " ' 2 +!' Q# 6+2!8' " ' 5" " 8' 8+!D 5+

9+!+' 8' 2' 4"524' 859""4' 7"2!3' "!' +25 ' " ' 9+' QQ' 1!+5 5 8' " ' + "8' !+8 ' @9 59' 928' 3 !+5 ' 5" !"4' " ' 9+' 859""48' " ' 9+' 3 8 ! 5 ' +3 524' 81+5 " ' " ' 859""48' 8' ! 8 +3' "' 2' B+3 524' 5"!18' 211" +3' 76' 9+' 2 " 24' 7"2!3' 9+' 1! B2!6' 859""48' 8 78 3 I+3' 76' 9+' +3+!24' ."D+! B+ ' ' 9+ 8+D+!24' 8 2 +8' "!B' ' +259' 2' .!" 1' " ' B"3+4' 859""48' 5" "!B .' 28' 54"8+46' 28' 1"88 74+' "' 9+' 1!"D 8 " 8' " ' 9+' 859""4' 42@' " ' $>>=

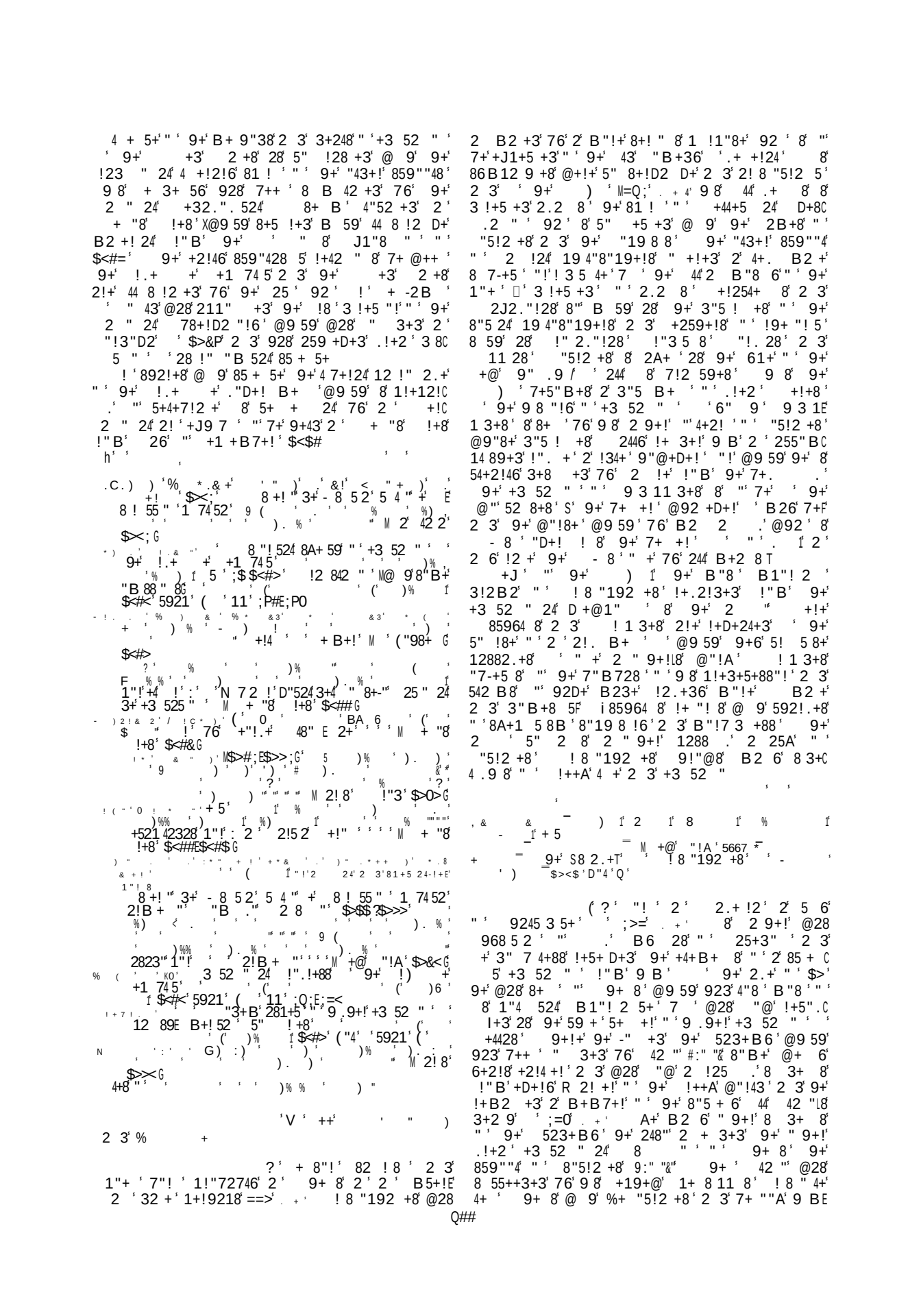
9+' 25 24' 8 2 8' " ' 1! B2!6' +3 52 " ' 25C 5"!3 .' "' 9+' 42 +8 ' " 5 24' !+1"!' 8' 3 52 +3' 76' 9+' "44"@ .' 274+' 9+' 1!"1"! " ' " ' 59 43!+ ' " ' 2 + 3 .' 859""4' 28' 89"@ ' 76' 9+' 274+' M5"4 B 8' $#2 3' $$G 2 3' 9+' 9 .9' 3+.!++' " ' 44 +!256' M2 +5 .' P# P' 1+!' 5+ ' " ' 9+' 1"1 C 42 " ' "D+!' &' 6+2!8' " ' 2.+' ' $<#PG' 2!+' +J5 .' 242!B' ' 1!+8+ ' 9+!+' 8' 2' 8 !" .' B "D+B+ ' "@2!3' 5!+28+' " ' 5+ !24' 5" !"4' "D+!' 1! B2!6' +3 52 " F' +D+ ' 9+' 5"B14+ +' 2 " 24 I2 " ' " ' 1! B2!6' 859""48' 8' 23D"52 +3

! .' 9+' 852' 6+2!' $<#0' 9+' 2 " 24' 7"2!3' +J1+ 3+3' d= Q$Q =$< "!' 9+' +8 274 89C B+ ' 2 3' B2 + 2 5+' " ' 1! B2!6' 859""48' ' 9+' +3+!24' 521 24' ' 9+' +!! "! +8 ' 2 3' "!' 1! B2!6' 859""48' ' 9+' 8 2 +8 ' 8 11"! +3' 76' 2 " 24' 38

"!B24' 859""48 ' @9 59' "!B' 2' D+!6' B1"! 2 ' +2 !+' " ' 9+' !.+ +' 868 +B' " ' 1 74 5' C 8 ! 5 " ' 2!+' 2' 4 A' 7+ @++ ' 9+' 1! B2!6



D+!8 +8ˢ 7 ˢ @ 9ˢ 1!"D 8 " ˢ "!ˢ B"3+! ˢ 8 3 +8ˢ 9+6ˢ 8 44 !+ 2 ˢ 9+ˢ 54288 524ᶠ 9 B2 +8ˢ 9+6ˢ B7+!ˢ =P#ᶠ 28ˢ 2.2 8ˢ $<# 1 74 5ˢ% " 9+ˢ +!+8ˢ" ˢ 9+ˢ."D+! B+ ˢ ˢ 9+ˢSˢ9 .9+!ˢ +3 52 " Tˢ " ˢ 6" .ˢ @"B+ ˢ 8ˢ 3 52 +3ˢ 76ˢ 9+ˢ +8 274 89B+ ˢ "ˢ @"ˢ 2 " 2ᶠ 8+5" 32!6ˢ 859""48ˢ % 1ˢ " +ˢ2ˢ + "8ˢ !+8ˢ 9+ˢ" 9+!ˢ2ˢ 2ˢ 42 2ˢ 9+6ˢ "44"@ˢ 9+ˢ 5!"@3+3ˢ 1!".!2Bˢ " ˢ 9+ˢ% ˢ@ 9ˢ 9+ˢ 233 " ˢ"ˢ B 8 5ˢ 2 3ˢ 3"B+8 5ˢ 85 + 5+ˢ ˢ ++38ˢ 92!346ˢ 7+ˢ 82 3ˢ 92ˢ 9+ˢ B2-"! 6ˢ" ˢ6" .ˢ@"B+ ˢ ˢ !.+ 2ˢ 2!+ˢ+3 52 +3ˢ ˢ5" D+ 8ˢ2 3ˢ59 !59ˢ859""48 % ˢ ˢ 9 ˢ '% "ᶠ ? 9+ˢ + "! 8ˢ " ˢ !+8 3+ ˢ 2!B + "ˢ "ˢ B"3+! I+ˢ +3 52 " ˢ ˢ !.+ 2ˢ@+!+ˢ 2746ˢ 8+5" 3+3ˢ 76ˢ 9 8ˢ B 8 +!ˢ " ˢ 1 74 5ˢ 8 ! 5 " ˢ "5 "!ˢ D+ 2 +32ˢ@9"ˢ 1" +3ˢ" ˢ 9+ˢ 25ˢ 92ˢ C 3 8 ! +8ˢ"@+ˢ 9+ !ˢ1+! +5 " ˢ "ˢ85 + 5ˢA "@4C +3.+ˢ 2 3ˢ 92ˢ B2 2ᶠ 427"!ˢ B 8ˢ."ˢ 24" .ˢ @ 9ˢ 8 ! 5 " ˢ ˢ 9+ˢ85 + 5+8ᶠ 9+ˢ 44 8 !2 +3ˢ 9 8ˢ 1"8 " ˢ 76ˢ 9+ˢ 9+ ˢ !+5+ ˢ D+!82ᶠ +JC 1"8 " ˢ"ˢ $>&0ˢ ˢ .42 3ˢ @9+!+ˢ 5" 43ˢ 7+ˢ 8++ ˢ 9+ˢ !+8 4 8ˢ" ˢ8 59ˢ 5"B7 2 " ˢ "5 "!ˢ D+ 2 +32ˢ 8 8 +3ˢ 92ˢ ˢ @28ˢ +5+882!6ˢ "ˢ A++1ˢ ˢ B 3ˢ 9+ˢ 1+5 4 2!ˢ ++38ˢ" ˢ !.+ 2ˢ ˢ !"3 5 .ˢ +59 524ᶠ 8 ! 5 " ˢ "ˢ 9+ˢ 5" !6ˢ 2 3ˢ 255"!3 .46ˢ 8 59ˢ 8 ! 5 " ˢ @28ˢ 2 . !2 +3ˢ 76ˢ 5!+2 .ˢ 3+12! B+ 8ˢ" ˢ 21 C 5 4 !+ˢ ˢ 9+ˢ D2!" 8ˢ% 1ˢ ".+ 9+!ˢ @ 9ˢ 3+12! B+ 8ˢ" ˢ B +8ˢ @9 59ˢ 42 +!ˢ 923ˢ 2 ˢ +19+B+!2ᶠ +J 8 + 5+ˢ 7 ˢ 4+3ˢ "ˢ 9+ˢ +8 274 89C B+ ˢ"ˢ 2ˢ 2 " 2ᶠ 859""4ᶠ" ˢ B +8 ˢ $>>< B2 2ᶠ !2 .ˢ@28ˢ !"3 5+3ˢ "ˢ 8+D+!2ᶠ % ˢ 2 3ˢ @28ˢ B23+ˢ 2ˢ 12! ˢ"ˢ 9+ˢ 5" !8+ˢ" ˢ 8 ! 5 " ˢ ˢ 2 " 2ᶠ1! B2!6ˢ859""48ˢ 76ˢ 1!".!2B8ˢ 3!2@ ˢ 1ˢ ˢ $><#ˢ 9+ˢ B"D+C B+ ˢ@28ˢ "8 +!+3ˢ76ˢ 9+ˢ 88"5 2 " ˢ"!ˢ 3 8C ! 2ᶠ 3 52 " ˢ 2 3ˢ 76ˢ 9+ˢ !+4 ." 8ˢ 8"5 + +8ˢ 2 3ˢ 2 6ˢ @"ˢ 2 ")ˢ 3 8 ! 2ᶠ 859""48ˢ @+!+ˢ "!.2 I+3ˢ " +ˢ 2ˢ + "8ˢ !+8ˢ 9+ˢ " 9+!ˢ 2ˢ "82! "ˢ 9+ˢ ."D+! B+ ˢ 248"ᶠ B2 2 8ˢ 9!++ˢ !23+ˢ 859""48ˢ "!ˢ. !48ˢ 2ˢ + "8ˢ !+8ˢ 2 3ˢ 8 B 42 +3ˢ 76ˢ 9+8+ˢ +J2B14+8ˢ 4"52ᶠ 2 C 9"! +8ˢ 2!+ˢ . D .ˢ 8+! " 8ˢ 2 + " ˢ "ˢ 9 8ˢ 7!2 59ˢ" ˢ1 74 5ˢ 8 ! 5 " ˢ 9+ˢ B1"! 2 5+ˢ " ˢ 5"B B+!5 24ᶠ !2 .ˢ 928ˢ 7 ˢ !+5+ 46ˢ 7++ ˢ !+5". I+3ˢ ˢ !.+ 2ˢ7 ˢ24!+236ˢ 9!++ˢ5"B C B+!5 24ᶠ 859""48ˢ 92D+ˢ 7++ ˢ +8 274 89+3ˢ 2ˢ 9+ˢ 521 24ᶠM @"ˢ "!ˢ B+ ˢ2 3ˢ" +ˢ "!ˢ@"B+ G ˢ2 3ˢ 8+D+!2ᶠ 8 B 42!ˢ 859""48ˢ ˢ1!"D 5 24ᶠ 5 +8 %) % ˢ)% "ᶠ ? ˢ ˢ >0 2ˢ 3+12! C B+ ˢ"ˢ2.! 5 4 !+ˢ@28ˢ 5!+2 +3ˢ@ 9ˢ 9+ˢ 81+5 24ᶠ "7-+5ˢ " ˢ 3 8 .ˢ 2ˢ A "@4+3.+ˢ " ˢ 24ᶠ 9 .8ˢ !+42 .ˢ "ˢ2.! 5 4 !+ˢ 9!" .9" ˢ 9+ˢ5" !6ᶠ 7 ˢ4 4+ˢ @28ˢ + +5 +3ˢ ˢ 9 8ˢ @26ˢ 1! 5 12446ˢ 9!" .9ˢ @2 ˢ"ˢ 38ˢ 4ᶠ 9 8ˢ 3+12! B+ ˢ @28ˢ 5" D+! +3ˢ ˢ $><<ˢ "ˢ 9+ˢ B 8 !6ˢ" ˢ 2.! 5 4 !+ˢ ˢ@9 59ˢ @28ˢ 54 3+3ˢ 2ˢ 3 D 8 " ˢ "ˢ 8 ! 5 " ˢ 5+ˢ 9+ˢ 2ˢ B7+!ˢ" ˢ859""48ˢ " ˢ 2.! 5 4 !+ˢ 92D+ˢ 7++ ˢ +8 274 89+3ˢ ˢ 9+ˢ 3 +!+ ˢ1!"D 5+8ˢ@ 9ˢ142 2 " 8ˢD +62!38ˢ 2 3ˢ 9+ˢ" 9+!ˢ +5+882!6ˢ +R 1B+ ˢ ˢ@9 59ˢ 8 ! 5 " ˢ 8ˢ. D+ ˢ 7" 9ˢ ˢ 9+"!+ 524ᶠ 2 3ˢ 1!25 524ᶠ 2.! 5 4 !+ 9+ˢ 23D2 2.+ˢ @9 59ˢ 9+ˢ +3+!24ᶠ 521 24 + -"68ˢ !"Bˢ 9+ˢ "8 +! .ˢ +2!+ˢ" ˢ 9+ˢ."D+! C B+ ˢ 8ˢ 44 8 !2 +3ˢ76ˢ 2ˢ .!" 1ˢ " ˢ81+5 24ᶠ 8+5C " 32!6ˢ859""48ˢ@9"8+ˢ 2B+8ˢ8 5 + 46ˢ 3 52 +ˢ 9+ !ˢ.+ +!24ᶠ 592!25 +!ˢ 9+ˢ B"8ˢ B1"! 2 ˢ " ˢ 9+8+ˢ2!+ˢ 9+ˢ 2 " 2ᶠ 8 +ˢ "!ˢ +5" 3C 2!6ˢ +259+!8ˢ 9+ˢ 2 " 2ᶠ 523+B6ˢ " ˢ +ˢ ! 8ˢ 2 3ˢ 9+ˢ "!B24ᶠ 8 +ˢ "!ˢ 968 524ᶠ 4 !+ / ˢ)% "ᶠ ? ˢ .9+!ˢ +3 52 " ˢ BC 12! +3ˢ ˢ 9+ˢ D+!8 +8ˢ2 3ˢ8 1+! "!ˢ +59 524ᶠ 859""48ˢ 8ˢ 3+!ˢ 9+ˢ B B+3 2 +ˢ 5" !"4ᶠ " ˢ 9+ˢ +3+!24ᶠ ."D+! B+ ˢ 9+ˢ @"ˢ D+!8 +8ˢ 24!+236ˢ B+ " +3ˢ "!3"D2ˢ2 3ˢ + "8ˢ !+8ˢ @+!+ˢ!+"!.2 I+3ˢ76ˢ 9+ˢ!+1 74 52 ˢ."D+! B+ ˢ 8"B+@92ˢ2 +!ˢ 9+ˢ B"3+4ᶠ " ˢ 9+ˢ !+ 59ˢ 25 4C +8ˢ 28ˢ 5" 8 +3ˢ 76ˢ 21"4+" ˢ 9+ˢ @2 ˢ " ˢD 24ᶠ " ˢ7+ @++ ˢ 9+ˢ 25 4 +8ˢ4+3ˢ "ˢ 9+ˢ 82B+ˢ 2!!"@ˢ 81+5 24 I2 " ˢ 92ˢ @28ˢ 4" .ˢ 9+ˢ 72 +ˢ " ˢ 9 .9+!ˢ +3 52 " ˢ ˢ !2 5+ˢ "ˢ 5"!!+5ˢ 9 8ˢ + 3+ 56ˢ 2ˢ 3 +!+ ˢ 868 +B ˢ @28ˢ 23"1 +3ˢ ˢ 9+ˢ "!.2 I2 " ˢ "ˢ 9+ˢ 2 " 2ᶠ D+!8 6ˢ " ˢ 2ˢ 42 2ˢ +8 274 89+3ˢ ˢ $<#&ˢ 9 8ˢ D+!8 6ˢ "!B8ˢ2 ˢ"!.2 5ˢ7"36ˢ 3+!ˢ2ˢ 1!+8 3+ ˢ@9"ˢ 928ˢ 8 1+!D 8"!6ˢ 1"@+!8ˢ "D+!ˢ 24ᶠ 9+ˢ 25 4 +8 259ˢ" ˢ 9+ˢ 9!++ˢ D+!8 +8ˢ 5"B1! 8+8ˢ 2ˢ 25 4 6ˢ " ˢ 42@ˢ 2ˢ 25 4 6ˢ " ˢ 19 4"8"196ˢ 2 3ˢ 4+ +!8ˢ 2ˢ 25 4 6ˢ " ˢ 2 !2ᶠ 85 + 5+8ˢ 2 3ˢ 2ˢ 25 4 6ˢ " ˢ 1968 524ᶠ 2 3ˢ B2 9+B2 524ᶠ 85 + 5+8ˢ "!3"D2ˢ2 3ˢ + "8ˢ !+8ˢ 92D+ˢ 248"ˢ 2ˢ B+3 524ᶠ 25 4 6ˢ 9+ˢ 1!".!2B8ˢ 3+.!++ˢ +J2B 2 " 8ˢ + 5 ˢ 2!+ˢ !+. 42 +3ˢ 76ˢ " 5 2ᶠ 1!".!2B8ˢ 9+ˢ D+!8 6ˢ " ˢ 2ˢ 42 2ˢ 4 A+ˢ 9+ˢ 2 " 2ᶠ % 1ˢ 8ˢ@9"446ˢ B"3+! ˢ ˢ592!25 +!ˢ2 3ˢ 9+ˢ 9 .9ˢ8 2 32!38ˢ B2 2 +3ˢ2 3ˢ 9+ˢ54"8+ˢ"!.2 C I2 " ˢ"ˢ 9+ˢ8+D+!2ᶠ 25 4 +8ˢ@ 44ˢ B+ˢ 8ˢ 7+4 +D+3ˢ B12! ˢ 2ˢ B"!+ˢ 8"4 3ˢ 592!25 +!ˢ "ˢ 9+ˢ B"3+B ˢ859+B+ˢ" ˢ8+5" 32!6ˢ 8 ! 5 " ˢ 9+ˢ 9!++ˢ D+!8 +8ˢ 92D+ˢ 2ˢ !+. 8 !2 " ˢ"ˢ 27" ˢ ;P##ᶠ 8 3+ 8ˢ 9+6ˢ 2!+ˢ B2 2 +3ˢ +J54 C 8 D+46ˢ 76ˢ +3+!24ᶠ 211!"1! 2 " 8ˢ 9+!+ˢ2!+ˢ "ˢ " ˢ ++8ˢ 2 3ˢ 9+ˢ B2 ! 5 42 " ˢ2 3ˢ .!23 2C " ˢ ++8ˢ 2!+ˢ D+!6ˢ4"@ˢ "!ˢ 9+ˢ6+2!ˢ $<#>ˢ 9+ˢ 211!"1! 2 " 8ˢ @+!+ˢ 28ˢ "44"@8ˢ D+!8 6ˢ " ˢ "!3"D2ˢ nQ0& >QPᶠ D+!8 6ˢ" ˢ + "8ˢ !+8ˢ d==< ;P#ᶠ D+!8 6ˢ" ˢ 2ˢ 42 2ˢ d=;# ### 9+ˢ."D+! B+ ˢ 8ˢ +J5++3 .46ˢ4 7+!24ᶠ ˢ 9+ˢ B2 +!ˢ" ˢ 521 24ᶠ +J1+ 3 !+ˢ "!ˢ 9+ˢ D+!C 8 +8ˢ 2 3ˢ 928ˢ !+5+ 46ˢ 23"1 +3ˢ 142 8ˢ "!ˢ B2. 5+ ˢ +@ˢ 7 43 .8ˢ "!ˢ 9+ˢ 25 4 6ˢ " ˢ 1968 524ᶠ 2 3ˢ B2 9+B2 524ᶠ 85 + 5+ˢ M@9 59ˢ 54 3+8ˢ + . ++! .Gˢ " ˢ 9+ˢ D+!8 6ˢ " ˢ + "8ˢ !+8ᶠ "!ˢ 9+ˢ +!+5 " ˢ " ˢ 2ˢ +@ˢ 9"8C 1 24ᶠ 5"8 .ˢ d& ### ###ᶠ "ˢ 7+ˢ 2 ˢ 23- 5ˢ "ˢ 9+ˢ B+3 524ᶠ 859""4ᶠ 2 3ˢ "!ˢ 2ˢ 8+! +8ˢ " ˢ +@ˢ 7 43 .8ˢ "ˢ 5"B B+B"!2 +ˢ 9+ˢ +!5+ + 2!6ˢ " ˢ 9+ˢ D+!8 6ˢ " ˢ "!3"D2ˢ 9+ˢ 9 .9+!ˢ +59 524ᶠ !2 .ˢ 8ˢ B12! +3ˢ ˢ 9+ˢ 859""4ᶠ " ˢ B +8ˢ!+"!.2 I+3ˢ ˢ$><0ˢ 2ˢ5"44+.+ˢ" ˢ2.! 5 4C !+ˢ2 3ˢ2ˢ 2D24ᶠ2 3ˢ B 4 2!6ˢ859""4ˢ24ᶠ 3+!ˢ ."D+! B+ ˢ+" !"4 9+ˢ!+5+ ˢ3+D+4"1B+ ˢ"ˢ +59 524ᶠ +3 52C " ˢ2 3ˢ 9+ˢ.+ +!24ᶠ 2@2A+ .ˢ "ˢ 9+ˢ B1"!C 2 5+ˢ" ˢ85 + 5ˢ +3 52 " ˢ ˢ 8ˢ !+42 " ˢ "ˢ 3 8 ! 2ᶠ 1!".!+88ˢ 3 52 +ˢ 9+ˢ 5!+28 .



8+4 " 9+5" ! " +!B+ 28 " 2! + 8 " + " 9+ B2 6 1! 5+8 @9 923 7++ !2 +3 9+ 523+B6 " !6+2!8 42 +! @9+ 9+ @28 4 D .2 64+ + 9+ !+5+ D+3 2 5244 3+!C 2A+ 9+ +3 52 " " 4+J2 3+! " 25+3" f 9+ 2 423 " $; 2 3 9 8 + .2.+B+ 8++B8 " 92D+ 428 +3 "! ;6+2!8 2 9+ + 3 " @9 59 B+ 9+ !+ ! +3 " 2.+!2 ; ;< . + 1+ 8 11 8 3 +3 2 3 @28 8 55++3+3 9+ 9+23C 89 1 " 9+ 523+B6 76 %+ "5!2 +8 2 3 = 6+2!8 42 +! ! 8 " 4+ !+ ! +3 " 9+ 8 2 3 " 3+3 2 ! D24 859""4 9+ 65+ B "8 " 9+ @! .8 @9 59 92D+ 7++ 1!+8+!D+3 2!+ 9+ 4+5 !+8 @9 59 9+ 1!+12!+3 "!+ 3+4 D+!6 9+ 859""4 9" .9 9+ 248 @!" +" 9+!" @"!A8 "!+ 2 @ 3+!+ 1 74 5 @9 59 2!+ " + R " +3 9+ 3+2 9 " 4+J2 3+!M;Q;. + 4 9+ 2 E 25+3" 2 12! 6 "!5+3 ! 8 " 4+ " 4+2D+ 9+ 8 2 3 9+ 3 +3 9+ +J 6+2!+ +2!+ 9245 8 7"+2

! 8 " 4+L8 1!25 524 +J1+! + 5+ 28 2 +3 52C "!+ 9 8 2448 " @" @+44EB2!A+3 8 2.+8 9 8 "!89 1 " 9+ 6" .1! 5+ 2 3 9 8 9+2389 1 " 9+ 65+ B 8 " 4 A+46 92 9+ 923 2 6 .!+2 4 + 5+ "D+! 4+J2 3+! 2 3 9 8 244 8 " 8 " 9+ 14+282 +88+8 " 5" ! 4 + 8 ..+8 92 9+ 3 3 " ++4 2 +28+ 9+ 1"8 C " 28 ."D+! "!" 2 1! 5+ 2 6 528+ 9+ 3+248 @9 59 81 !+3 4+J2 3+!" @+!+ 76 " B+2 8 9"8+ " ! 8 " 4+ 28 @+ A "@ 9+B 9+ !"B 9+ $ % 2 3 +48+@9+!+ 7 !2 9+! 9"8+ " 42 " 2 3 8"5!2 +8 @28 8"5!2 +8 @9 923 1!+259+3 8+28" 2 3 " "8+28" 9+ ."81+4 " 2 !+.+ +!2 +3 +44+ 8B " 3+3 " 9+ 5" R +8 " 9+ +!8 2 B1 !+ 2 3 42 "L8 D +@8 @+!+ 8 B 42!' 9" .9 9+ 7 8 +3 9 B8+4- 59 + 46 @ 9 9+ " 9+!8 3+ " 9+ 82B+ 1!"74+B 9+ 1!+8+!D2 " " +8 +! + 28 !"B 9+ 2! 92. 2 8 59 3+28 @&!+ R + "!+ . " ! 8 " 4+L8 B 3 2 3 9+ "C @9+!+ 89"@8 2 6 +!+8 9+ @"!A @9 59 9 8 44 8 ! " 8 1 1 4 @28 3" .3 ! . 9+ 6+2!8 @9+ 9+@28 4+5 ! . 8 9 B 2 244 "!' 9+ % % 6 8 " 9 8 @"!A 2 3 9+ 1!+ 2 "!6 +1 8 4+ 8 2 "!.+!6 @" BC 1"! 2 !+81+5 8 9 8 D +@8 @+!+ 3 2B+ ! 52446 "11"8+3 " 9"8+" : 8 1 1 40 9+ !+.2!38 9+ 3 8 5 " 7+ @++ +44+ +8 2 3 72!72! 2 8 28 32B+ 24 2 3 9+ 8 44 54 .8 " 9+ "43 3+24 " 2 8+4 E8 5 .5 6 8 2 + +" @9+!+ 89"@8 9+ 4+28 211!+5 2 " " 9+ 25 "@9 59 @28 54+2!46 8++ 7" 9 76 42 " 2 3 8"5!2 +8 92 9+ ! 8 .1"@+!' @28 B 4 2!6 B" 2!596 ! 8 " 4+L8 @"!A 28 9+23 " 9+ 65+ B @28 " 2 B"!+ ! 4 592!25 +! 8 ! + 92 9+ 65+ B @28 2!' 4+88 8 55+88 4 92 9+ 523+B6 !2 .1!25 524 4+. 842 "!8 2 3 8 2 +8B+ 7 8" 7+52B+ 2 .!+2 5+ +! " !+8+2!59 +81+5 2446 7 "4".6 2 3 9 8 "!6 1+ 8 11 8 923 " 3" 7 4+3 9+ @26 7 "4".6F 7 " 9+ @9"4+ 8 ! + " 826 92 I""4".6 @28 9+ 5!+2 " " ! 8 " 4+ @9 4+ 9+ " 32 " 8 " 7" 2 6 @+!+ 42 3 76 9 8 288"5 2 + 2 3 8 55+88"! 9+"19!28 8

9+ 3 +!+ 5+ " 9+ 65+ B " 9+ 23D2 5+ B23+ 76 9+ 523+B6 B2 9+B2 58 1!+C D+ +3 3++3 !"B 5" ! 7 .B 59 " 9+ +J25 85 + 5+8 2 3 ! 8 " 4+L8 28 !" "B 524 2 3 5"8B"4". 524 +259 .@28 3 8 5 46 !+ !"C .!23+F 7 +D+!6 9 .92 3+1+ 3+3 1" 9+ 255 B 42 " 2 3 54288 52 " R 25 8 2 3 "78+!D2 " 8 9+ 65+ B +28 46 4+3 ! 8 " 4+L8 859+B+ " +3 52 " 8 2A+ 9+ B2 !"B 42 " 2 3 12! 5 42! !"B 92 . D+ 9+ ! 1 "!@9 59 9+ !+23+! B 26 7+!+ +!!+3 " 9+2! 54+ " 42 " 92 B 8 7+ " +3 +81+5 2446 9+!+ 2!+ 9+ 1" 8 " 3 +!+ 5+ @9 59 1!+8+ 8+D+!24 +2 !+8 " +!+8

" ! 8 " 4+ 28 " 42 " +3 52 " 8 2 7!2 59 " 9+ 1!25 524 85 + 5+ " 1"4 58 92 8 9+ 2! " 8+5 ! .9211 +88 ' M & "! 2 5"B B 6 " 5 I+ 8 9+!+ 8 2 BC 1"! 2 3 +!+ 5+ / 9"@+D+! 9+ @26 @9 59 ! 8 " 4+ !+.2!38 9 8 + 3 " 42 " @28 2 ."" 3 C 8 2 + T " ! S 5" 3 " T " 9+ 8" 4)8 F " ! 8 " 4+ 8 !2 9+! 9+ S 25 D 6 T MB165 JG 1!"5++3 .! !"B 8 59 2 8 2 + 9 8 3"+8 " +B+2 9"@+D+! 92 ! 8 " 4+L8 3+24 @28 B"!+ 1!25 524 92 42 "L8 9+ 5" !2!6 @+ 3 92 " 9 B 9+ 9 .9+8 "!B " 25 D 6 8 S 5" +B142 " T # &1 @9 4+ 42 " 24@268 8 8 8 92 9+ !+8 4 8 " 85 + 5 5" +B142 " B 8 7+ B23+ 8+!D 5+274+ " 9+ 5"B B 6 2 3 " B2 A 3 " 9 42 " 2 3 ! 8 " 4+ 9"@+D+! 2!+ 2.!++3 92 @" A 38 " ."3 +88 @9 59 ! 8 " 4+ 52448 ."3 +88 " 592!25 +! 2 3 .""3C +88 " +44+5 M 859"428 5 19!28+ B"!24 2 3 +44+5 24 D ! +C 2!+ +5+882!6 2 3 92 9+ !8 8 " 7+ 1!"3 5+3 76 927 2 " M+ 5!* "8C 9+ 8+5" 3 76 +259 . 8 9 8 B14 +8 92 @+ B 8 3 " ."3 9 .8 7+ "!+ @+ 2!+ ."3 " !3+!" 7+5"B+ ."3 9+ +5+88 6 " +3 52 " 8 2112!+ 9 8 8 7"!3 2 " " +3 52 " " 1"4 58 928 8"B+ D+!6 B1"! 2 5" 8+R + 5+8 42 " 923 . D+ 2 859+B+ " +3 52 " !" 9+ S 2!3 2 8 T 9+). %1 @9 59 3+248 @ 9 9+ 3+24 8 2 +F 9+ ! 9+ 8+ 9 B8+4 " 5" 8 ! 5 2 8+5" 3E7+8 8 2 + 2 3 9+ 859+B+ " +3 52 " 3 +!8 255"!3 .46 9+ 82B+ @26 ! 8 " 4+ +259+8 92 +259 "!B " 8 2 + ? 2! 8 "5!2 5 3+B"5!2 5 2 3 9+ !+8 ? 928 2 81+5 24 A 3 " +3 52 " 211!C 1! 2 + " F 8 " 46 9+ 7+8 8 2 + @9+!+ 9+ ."" 3 B2 2 3 9+ ." " 3 5 I+ 2!+ 3+ 524 92 9+ ! .9 +3 52 " @ 44 +5+882! 46 7+ 92 @9 59 8 7+8 "!' 9+ 3 D 3 24 28 8 59 @ 44 248 "" "44"@ 92 +3 52 " 8 2 B2 +!" 1 74 5 5" 5+! 2 3 52 " 7+ 4+ " 1! D2 + 5" !"4 9" .9 ! 8 " 4+ 23B 8 2 9+ + 3 " 9+ % 92 2 B1+! +5 8 2 + @9+!+ +3 52 " 8 +.4+5 +3 2 9+!8 " 2B 4 +8 B 8 3" 9+ ! 7+8 " 1+! "!B 9+ 5 " 8 " 3"C B+8 5 4+. 842 "!8

! 8 " 4+L8 859+B+ 8" 2! 28 8 1!+8+!D+3 8 " 7+ " 3 9+ +D+ 9 2 3 .9 9 ""A8 " 9+ $ % 1 2 3 "44"@8 D+!6 54"8+46 " 9+

4 +8 " 42 "L8 859+B+ 28 . D+ 9+ +D+ 9 ""A" 9+ 2@8 " 9 7+. @ 9 2 56 9" .9 ! 8 " 4+ 3"+8 " . +2!46 8" B 59 3+ 2 4 " 9 8 8 7-+5 28 42 " B 4A 3 + 14+ 6 " B "D+B+ 2 3 +J1"8 !+ 5"43 2!+ 9 8 B2 1" 8 1 " 9+ 2.+ " P 9+ 59 43 8 "" 6" .' "! 5"B1 48"!6 +J+!5 8+8 " 2 6 8"! F 9+8+ @" 43 " 46 9 3+!' 8 .!"@ 9 2B+8 2!+ 9+ 59 + B+2 8 " +3 52C " 2 9 8 8 2.+ 2 3 9+8+ B 8 7+ 211!"D+3 76 9+ 81+5 "! " 9 43!+ ! 8 " 4+ 2.!++8 @ 9 42 " 92 9+6 89" 43 "! 9+ B"8 12! 7+ B 2 " 8 " @92 9+ 59 43 @ 44 92D+ " 3" @9+ 8 "43+! 7 9+ 9 A8 2 B 8 2A+ " !6 " 1!+D+ 59 43!+ !"B 5! ;3 .' 2 3 A 5AC .' !++46 9+8+ 9 .8 9+41 9+ ! .!"@ 9 ! 8 " 4+ 54+2!46 288 B+8 92 9+ 59 43!+ 2!+ " 7+ 7!" .9 1 2 9"B+ 2 3 " 1 74 5 2 859""48 28 42 " 1!"1"8+3F 7 9+ 928 2 8 !" .' ++4 .' " 9+ 32 .+! " 4+ .' 9+B 288"5 2 + B 59 @ 9 8+!D2 8 2 3 9+ 8 8 8 92 9+6 B 8 7+ 82 +. 2!3+3 !"B 244 3+5+ @"!38 2 3 8 .9 8 !"B 9+ 2.+ " P 44 92 " 0 9+6 89" 43 4""A " 2 9+ +J+!5 8+8 @9 59 9+6 @ 44 8"" 92D+ " 2A+ 12!

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9+ +3 52 " " 9+ 7"36 B 8 1!+5+3+ 92 " 9+ B 3 8" .6B 28 58 2 3 3! 44 2!+ +88+ C 24 2 9 8 8 2.+ +B 8 7+ 52!+ 4 9"@+D+! " " 244"@ 92!3 2 3 7! 24 +J+!5 8+8 @9 59 81" 4 9+ 59 43!+ 8 211+2!2 5+ 2 3 8 9+ !.!"@ 9 1 " 9+ 2.+ " 1 7+! 6 " 46 9+ 4 .9 +! +J+!5 8+8 2!+ " 7+ 244"@+3 9+ 4 8 " 46 B 1 5 (5 "!8 89"@8 92 9+ 82B+ 1+!8" 928 D+!6 !2!+46 7++ 8 55+88 4 7" 9 9+ 5" +8 8 " 7"68 2 3 9"8+ " B+ 2 3 9 8 8 2 54+2!' 3 52 " 92 8+D+!+ !2 .' 8 723 "!6" .' 7"68 9+ B+ "!8+D+!+ .6B 28 5 !2 .' 3"+8 " 7+. 44 9!++ 6+2!8 2 +! 1 7+! 6 2 3 9 8 9!++ 6+2!8 +!D24 8 " 7+ 3+D" +3 " 9+ S " 9+!' 8 7-+5 8 T 8 "

7+ " +3 9+!+ 92 ! 8 " 4+ 3 +!8 !"B 42 " A++1 .' .6B 28 5 !2 .' B"!+ 892!146 8+12!2 +3 !"B 9+!' 8 7-+5 8 @9 59 " 46 3 2 1425+ 7+ @++ 9+ @" 1+! "38 " .6B 28 5 !2 . +' 9+43 92 @28 B1"88 74+ " +J+! 9+ B 3 2 3 9+ 7"36 2 9+ 82B+ B+ 42 "L8 ! 4+ @28 " 9+ 5" !2!6 S +D+!' " B "D+ 9+ B 3 @ 9" 9+ 7"36 "! 9+ 7"36 @ 9" 9+ B 3 T 2 3 9+ 7+. 8 9+ S " 9+! 8 7-+5 8T 2 9+ 2.+ " $# +' 248" 288 B+8 92 B2 9+B2 58 @ 44 7+ 7+. 2 9+ 2.+ " $> @9+ ! 8 " 4+L8 1 1 4 @" 43 7+ 8 2! C .' " 9 8 .6B 28 5 !2 .' 2 3 274+ " 2 + 3 " 2 6 9 .' +48+ 7" 9 42 " 2 3 ! 8 " 4+ @+ " + 92 2 2!' 892!1+!' 4 +' 8 3!2@ 7+ @++ 23"4+85+ 5+ 2 3 +2!46 B2 9""3 92 @ 9 8 2 3 92 24 9" .9 23"4+85+ 5+ @28 1!+8 B2746 +2!4 +!' @ 9 9+ !++A8 92 2B" . 8 9+!+ 8 4 4+ 3" 7 92 9+ 1!"4" .2 " " 7"69""3 " 2 2.+ @9+ B"8 " " !' 1 1 48 92D+ " 7+ +2! .' 9+ !' 4 D .' @28 9+ 8+5!+ " " 9+ 1968 524 1+! +5 " " @9 59 9+ !++A8 2 2 +3 2 3 ! 8 " 4+ 8 2 .!+2 3+24 B"!+ 5" 8+!D2 D+ 9 8 B 2 +! 92 42 "

+ 92D+ 8++ 92 B 8 5 928 "7D " 8 1!25 524 4 6 7 8 + 3 8 " B+!+46 14+28 !+ + 9+! 8 14+282 " 5" !8+ 2 3 B 26 9+!+ "!+ 7+ 8+3 "!' 1 !1"8+8 " !+42J2C " 7 92 8 " 8 5 " 2 859+B+ " +3 52 " .2 @+ 5" 8 3+!' @92 8 9+ 9 .9+8 5 " " B 8 5 @+ 8++ 92 " 8 ! 89 2 B+2 8 " + B 14"6 .' 4+ 8 !+ "746 B 1 265 !6 G 9+ + 3 " 4 + 8 " @"!A "!' 7 8 +88F "!' @+ 2!+ 7 86 28 2 !+ +259+8 8 " 46 "!3+!' 92 @+ B 26 2 2 " "4+ 8 !+ 2 3 9+ " !' "55 12 " 89" 43 7+ @ 9 8"B+C 9 .' 92 928 D24 + 8+4 2 3 " B+!+46 28 2 B+2 8 "8"B+ 9 .' +48+ 9 8 8 " 9+ +3 52 " 24 5 " " B 8 5 + 9+!F "!' 9+ 6" .'2!+ " 5" 5+! +3 @ 9 9+ "74+ 8+ " 4+ 8 !+ 2 3 8 " +D+ +5+882!6 "!' 9+B "' 4+2! B 8 5 28 2 1!+12!2 " "!' 9+6 B .9 4+2! " "' 1426 42 +!' 4 F "!' 8"' 2!' 28 9+ "74+ 8+ " 4+ 8 !+ ."+8 9+6 B .9 5" + 9+B 8+4D+8 @ 9 4 8 + .' "' 1!" +88 " 24 1+!C "!B 2 5+8 @9 59 @ 44 +5+882! 46 7+ 7+ +! 92 9+ !"@ 9+!+ 8 2 9 !3 5 " " B 8 5 9+ S 1 !.2 D+ T @9+ 8+3 "+ +5 2 3 8C 592!.+ "D+!@!" .9 ++4 .8 " 1 6 2 3 +2! 7 92 52 " 7+ 8 +3 52 " 24 5 " + 9+! 8 5 52 " 46 7+ - 8 +3 9+!+ 8" 2!' 28 5" ! 7 +8 " 9+ !2 .' " 592!25 +! 2 3 @+ 3" 3 B 8 5 1!+8+ 8 2 9 .9+! 3+.!++ 92 2 6 9 .' +48+ 3 !+5 4 A+ +88+8 " 3 +!+ 61+8 " ++4 .' 2 3 592!25 +! 9 8 8+ 8+ B"!+ 3 !+5 46 B 2 D+ 92 12 .' "! 85 41 !+ @9 59 " 46 +J1!+88 3 +!C + 5+8 " 592!25 +! 2 3 8 5 B2 +! 8 9+!+ "!+ 76 4+2! .' " 2A+ 14+28 !+ 9+ ! .9 A 38 " B 8 5 92 9+ 6" .' 52 B"8 +28 46 7+ 4+3 " 2A+ 14+28 !+ ! .9 ++4 .8 2 3 ." "3 592!25 +!8 2 3 " ++4 12 2 9+ "11"8 +

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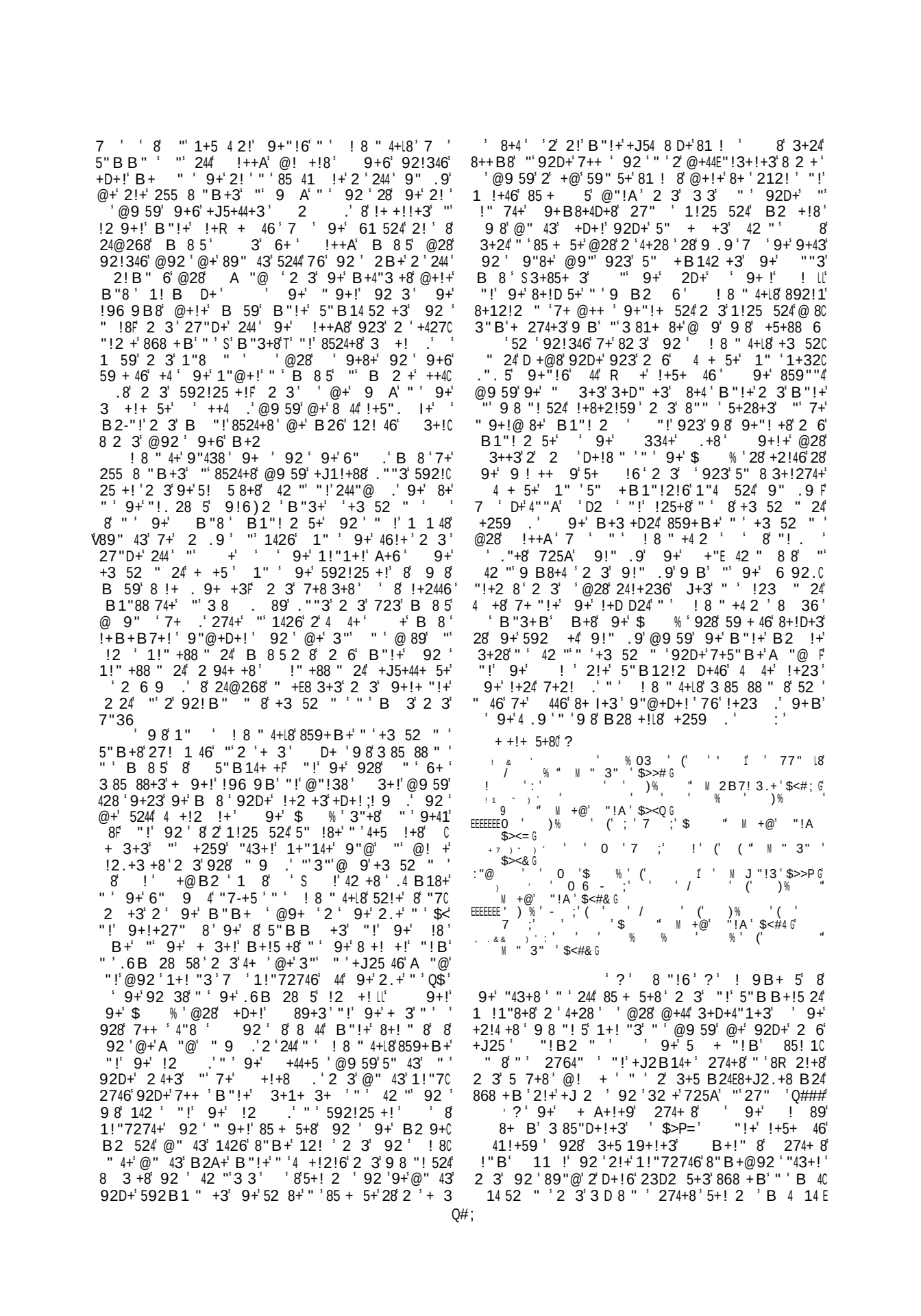

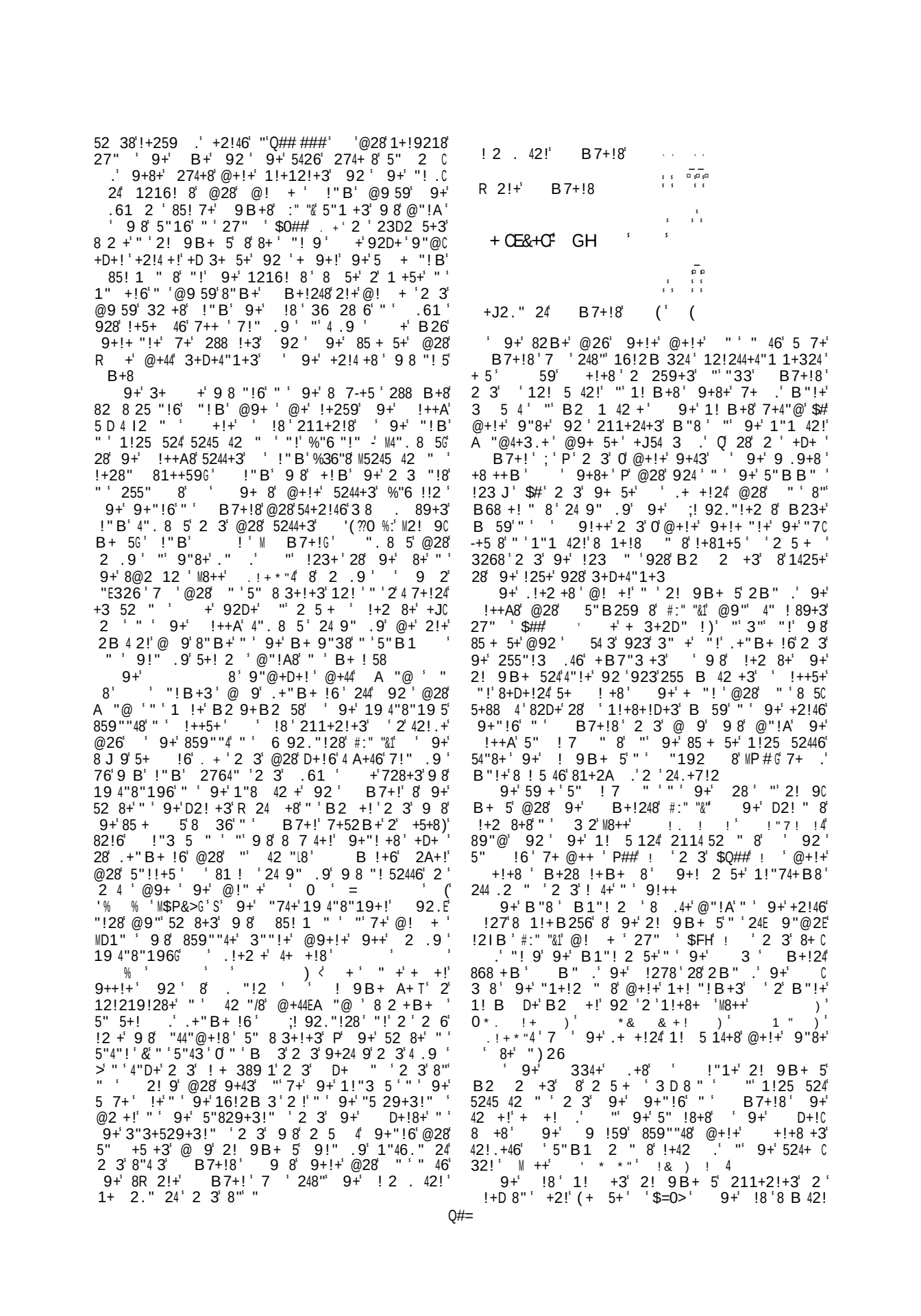

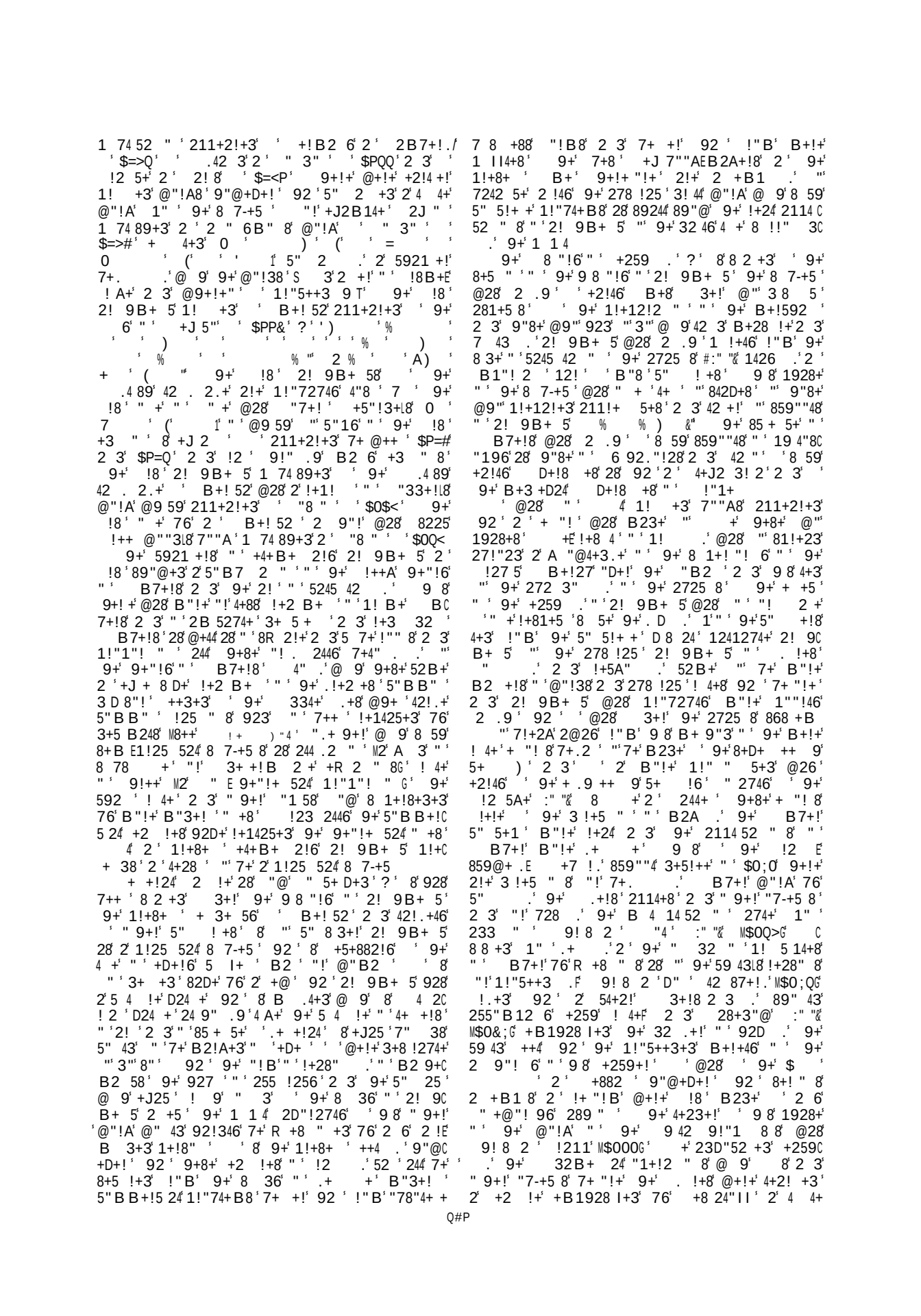

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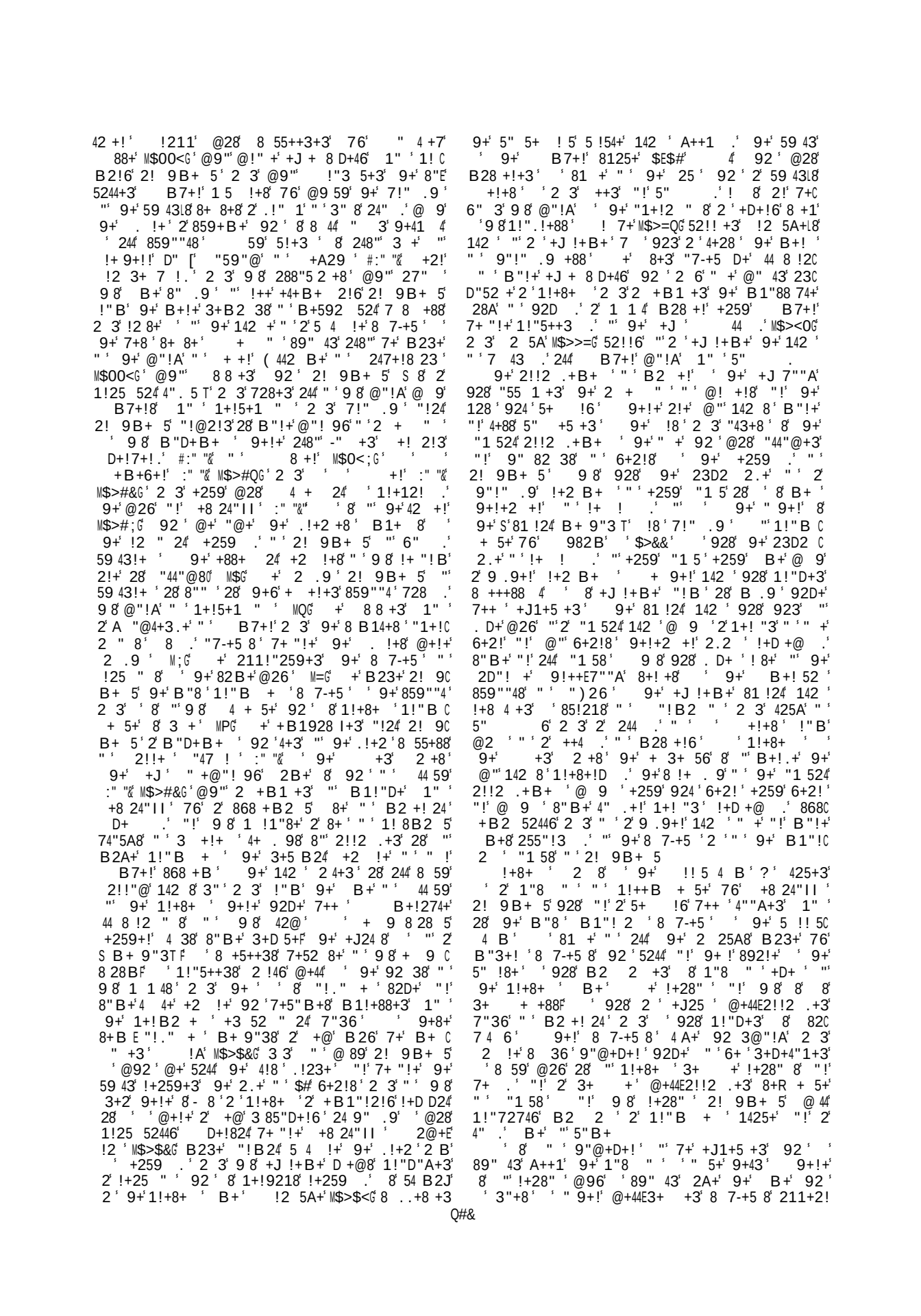

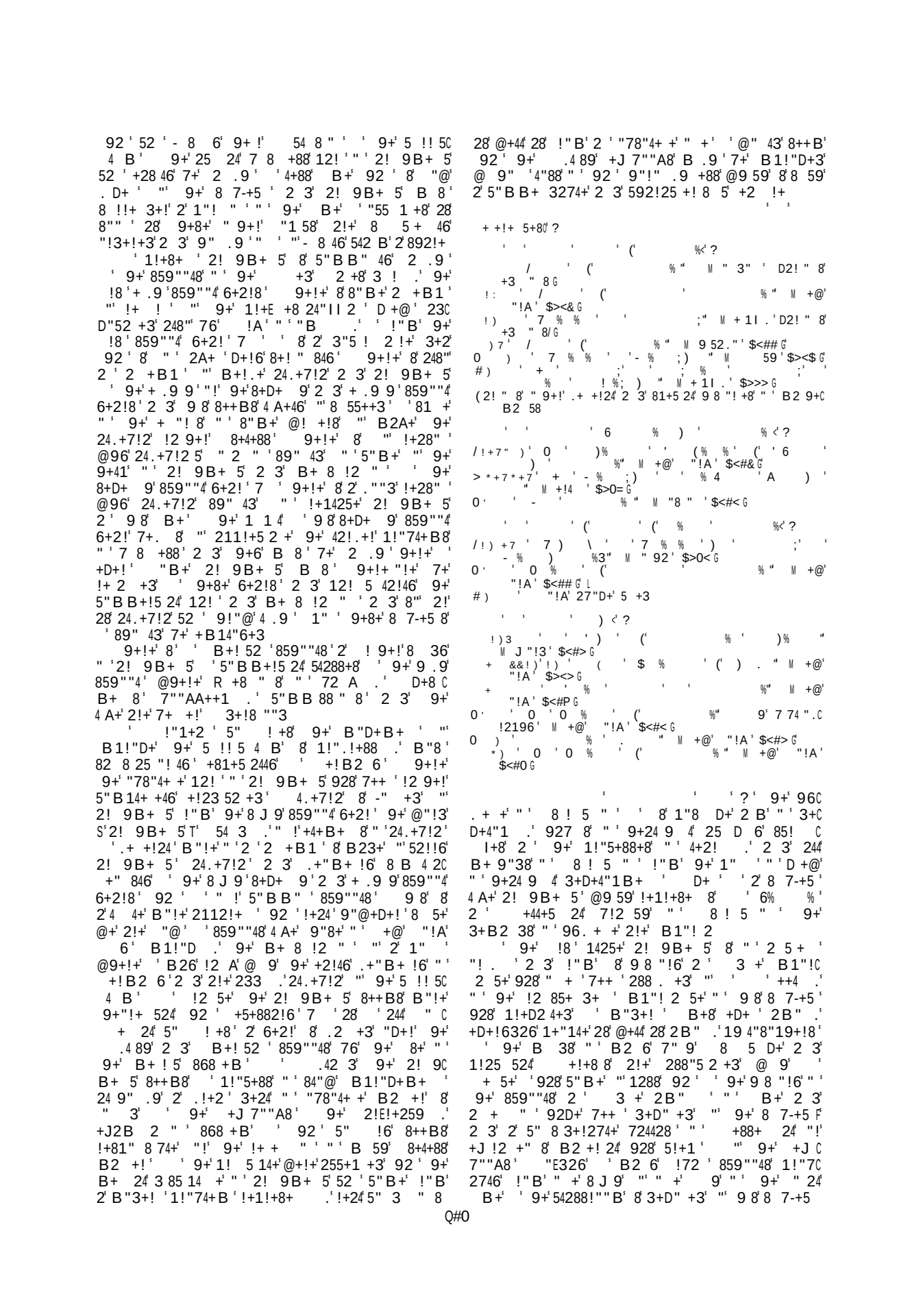

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.2 5+! 2 3 D 3 248 8++B " 92D+ 4 4+ 27 4 6 "! @"!A 2 B2 9+B2 58 2 3 " 9+!8 8++B " 7+ 81+5 24 32 .+! " +!D" 8 "D+!C 8 !2 !" 9 @"!A 9 8 8 7-+5 .4 89 1968 5 2 E ! !. 8 928 8 3 +3 59"!+2 59 43!+ 2 3 B2 6 " 9+8+ 528+8 9+ 928 " 3 3 + 28 9+ 9 A8 "52 8+8 5" +5 +3 @ 9 9+ 859""4 @"!A 2 3 2! 9B+ 5/9+ 3++B8 2 +81+C 5 24 25 "! 1!"3 5 . 9+ 3 8"!3+! 528+ " 2 +!D" 8 59 43 9+ B2 2 8 92 @"!A . 8 B8 8 4 274+ "52 8+ 59"!+2 9+ 528+ " 8"B+ 59 43!+ a28 1" +3 " 76 + +!24 24A+!"@"!A 2! 9B+ 5 8 2 !+R + 52 8+ " @"!!6 2 3 +! +!+ 5+ @ 9 84++1 9+ 59 43!+ 3" 8 B8 9+ !3!+2B8 9 8 8 2 32 .+! 8 . 24 8 59 "7D " 8 52 8+8 " - !6 "" 9+24 9 2!+ 5" 3+B +3 76 96. + + 7 3+B2 38 81+5 24 2 + " "8"B+ 4+88 "7D " 8 7 B"!+ .+ +!24 !+8 4 8 " 5+! 2 B+ 9"38 " 8 ! 5 "

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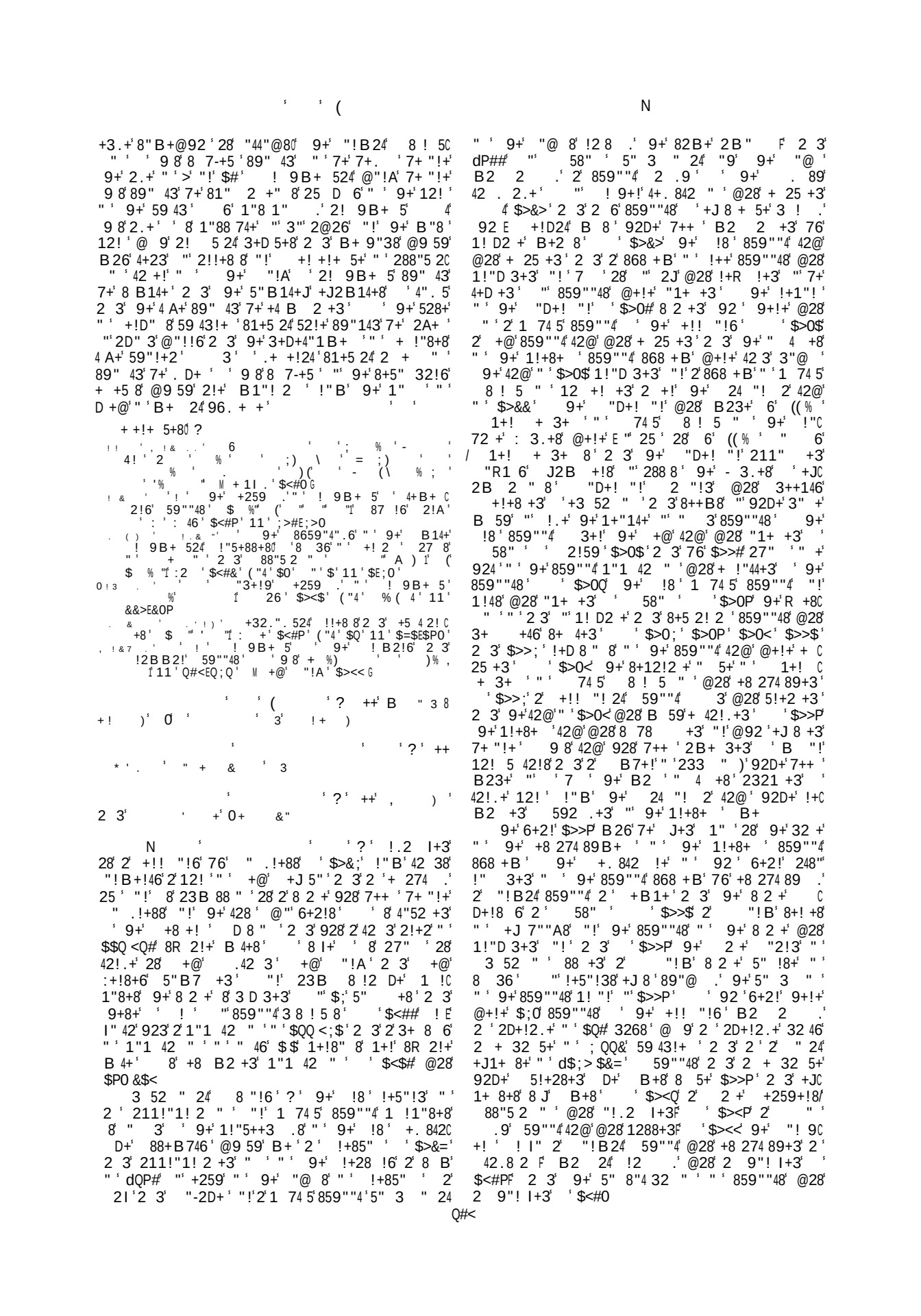
6. + 8 +81+5 2446 5" 5+! +3 @ 9 9+ 1!"74+B " 9+ 2. @9+ "!A 2! 9B+ 5 89" 43 7+ 7+. "!3+! "" 2 8@+! 9 8 R +8 " 8 +5+882!6 "" 5" 8 3+! 7! + 46 9+ B+ 24 "1+!2 " 8 D"4D+3 2! 9B+ 524 @"!A 9+ 8 B14+! 8 36 " B7+! 2 3 B7+! !+42 " 8 233 " 8 7 !25 " 2 3 9+ !+8 9+ 1!"5+88 " 4+2! . 8 59 + 46 " + " 25R ! . 927 24 288"5 2 " 8 92 96C . + + 3+B2 38 9+!+ 8 92 9+8+ 89" 43 7+ "!B+3 2 !2446 2 3 92 +! +!+ 5+ " 28C 8"5 2 " "!B+ 24 5" 8 " 89244 7+ 2D" 3+3 .2 +259 .2! 9B+ 5 "D+!6 6" . 59 43!+ 244 8"! 8 " "7-+5 D+ B+ 9"38 2 3 3+D 5+8 92D+ 7++ 3+D+4"1+3 2 3 9+8+ 2!+ 3++B+3 +5+882!6 8 59 8 ! 5 " 44 ! 9+! 211+2!8 92 9+ B7+!"!B8 2 3 9+ 4 A+ @9 59 2!+ 5"B B" 23 4 8 2!+ 3+D+4C "1+3 9+ +2!46 6+2!8 " 8 ! 5 " !"B 9+8+ 2!+ 4 A+46 "3+D+4"1 2! 5 24 2 3 .!"C +8R + 927 8 " 9" .9 28 44 8 !2 +3 76 ! ! 14+ 8 8"E5244+3 2!!+8 8 2 3 76 8"B+ " 9+ B7+!"!B8

9+ 1!"74+B " 9+ 1!"1+! 2.+ "!7+. 2! 9B+ 5 8 9+ 8"B+ 9 . 4 A+ 9 8 @92 2.+ 52 2 59 43 7+ 3! 44+3 2! 9B+ 524 1!"5+88+8 @ 9" 9+ 2 3 " 2! 5 24 3+D 5+8 2 3 9+ 4 A+ @9 59 2!+ 4 A+46 "1+!8 8 28 2!!+8 8 "!927 8 " +! +!+ 5+ " 288"5 2 " F 2 3 2 @92 2.+ 89" 43 9+ 8 36 " 4". 5 7+ 7+. F 2 @92 2.+ 3"+8 9+ 59 43 92D+ 2 285+ +!C +8 "!2! 9B+ 524 @"!AZ +! 92D+ 2 1!+8C + "" 23+R 2 + 32 2 "!2 8@+! . 9+8+ R +8 " 8 7 4 ! 9+!" D+8 .2 " 8 92D+ 7++ B23+ 9+ D+!3 5 " 96. + + 8 92 "!3 C 2! 46 "!B24 8 ! 5 " 2! 9B+ 5 89" 43 7+ 1"8 1" +3 4 2 4+28 9+ 2.+ " > "!$#" 9+ 24 2 1968 "4". 8 "88" !+8 3+ 2 4+6 244 !" +88"! 2 ! 5A 2 3 " 9+!8 2.!++ 5" 3+B . "!B24 8 ! 5 " 9 8 8 7-+5 7+ "!+ 9 8 2.+ S 2 9+B2 58 +D+!6 "!B T @! +8 !" +88"! 2 ! 5A S 8 2 8 7-+5 5" 81 5 " 846 44E +3 "" 9+ 59 43 B 3 3+248 " @ 9 !+24 9 .8 7 @ 9 278 !25 " 8 9+ !+ +!!+3 "" 5" 5!+ +7-+5 8 5" 5+! 8 " 9+ "7-+5 8 9+B8+4D+8 7 9+ ! !+42 " 8 "" +259 " 9+! D"4D+8 5"B12! 8" 2 2468 8 278 !25 " 9+ .!" +8R + B7+!"!B8 @9 59 8"" B2 6 59 4C 3!+ 92D+ 2 3 @9 59 "! . 2 + 9 8 1+! "3 2!+ +D 3+ 5+ " 9+ +5+88 6 @9 59 9+ 59 43 ++48 " . D .8"B + A 3 " 7"3 46 8921+ "" 9+8+ 278 !25 " 8 @9 59 9+ 8 5"B1+44+3 "" 8 36 T

9+ 1!25 524 +259 .8 " 9+ 96. + + " 8 ! 5 " 28 !+.2!38 2! 9B+ 5 B26 7+ 8 B B+3 1 9+ 4 .9 " " !' 1!+8+ A "@4E



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"!' 23"1 8' ! 4+8' 2 3' !+. 42 " 8' "!' 9+' 859""48F 1!+85! 7+8' 2 3' + "!5+8' 9+' 8+' " ' 2' "!B' 8+! +8' " ' +J 7""A8 ' 2 3' 2' C "!B' 5" !8+' " ' 8 36' "!'E 9+' 859""48F 23"1 8' 2' 4 8 ' " ' 7""A8' "!' 859""4' 4 7!2! +8F 88 +8' +3 52C " 24' 2 3' 4 +' 3 14"B28F 2 3' !+D"A+8' 2 6' 3 14"B2' "!' 5+! 52 +' "!' 52 8+' 9+')2!3' " ' J2B +!8' @9 59' 5" 8 8 8' " ' 9+' 1+! C + 3+ ' " ' 74 5' 8 ! 5 " ' 2 3' @"' 1+!8" 8' 211" +3' 76' 9 B ' 23"1 8' ! 4+8' 2 3' !+. 42 " 8' 5" 5+! .'+J2B 2 " 8F 1!+12!+8' 244' R +8 " 8' 2 3' .!23+8' 244' 121+!8F 88 +8' 2 3' !+D"A+8' 5+! 52 +8' "' +259F 2 3' !+5"B B+ 38' 52 3 C 32 +8' "!' 4 +' 2 3' +3 52 " 24' 3 14"B28 "!' +259' 5" 9 6' 9+!+' 8' 2' " 6' 59""4' 1+! + 3+ ' @9"' 211"! " 8' 9+' 859""4' B" +6' "' 9+' 3 8 ! 5 8F 211!"D+8' 244' 7 448' "!' 244' 1 !1"8+8' 2 3' 3!2@8' 9 8' @2!!2 ' "!' 9+ !' 126B+ F' 5" 3 5 8' 9+' +259+!8!' +J2B 2C " 8' "!' 9+' "2!3' " ' J2B +!8' 2 3' "!@2!38' 244' 121+!8' "' 9+B' "!' .!23 .F' 211" 8' 3 8C ! 5 ' ! 8 ++8' 2 3' 448' 2 ' D252 5 +8F 5" 3 5 8' 2 ' 2 24' 5" 6' +259+!8!' 8 +F' D 8 8 ' +J2B +8 ' 2 3' 928' .+ +!24' "D+!8 .9 ' "D+!' 9+' 859""48' " ' : 8' 5" 6 "!' +259' 859""4' 3 8 ! 5 ' 9+!+' 8' 2' 7"2!3' " ' ;' 59""4' ! 8 ++8 ' " +' +4+5 +3' +259' 6+2!' 76' 9+' 1+"14+ ' 2 3' 9"43 .' " 5+' "!' ;E6+2!' +!B8 ' ' 8' 9+ !' 3 6' "' + "!5+' 9+' ! 4+8 ' !+. 42 " 8 ' 2 3' 42@8F "' B2 2.+' 2 3' 52!+' "!' 9+' 859""4' 1!"1+! 6F "' 1!"D 3+' ! !+' 2 3' 8 114 +8F "' !+ ' 7 43 ' "!' !+12 !' 859""49" 8+8' 28' 3 !+5 +3F "' +B14"6' +259+!8' 2 3' " 9+!' +B14"6++8' 2 3' J' 9+ !' 5"B1+ 82 " F "' +B14"6' 2' 8 1+!D 8 .' 1! 5 124' ' 9+' 3 8 ! 5 ' 5" 2 8' $#### "!' B"!+' 5+ 8 8' 59 43!+ F "' 23B ' 2 3' +J54 3+' 1 1 48F "' 8++' 92 ' 2 ' 2 24' 859""4' 5+ 8 8' 8' 2A+ F "' 524' 3 8 ! 5 ' B++ .8' ' +B+!.+ 5 +8' "!' " ' 1+ " F "' 524' 2 ' +4+5 " ' "' D" +' 2' 81+5 24' 2J' "!' 233 C " 24' 859""4' 25 4 +8 ' "!' 7" 38' "!' 2' +@' 859""49" 8+F 2 3' "' B2A+' !+1"! 8' "' 9+' " 6' 1+! + 3+ ' "!' 9+' 1+! + 3+ ' " ' 74 5' 8 ! 5 " '% ' ') "' ? ! I" 2' "! . 2446'!+5+ D+3' 9+' $& 9' 2 3' ;& 9' 8+5 " ' " ' 42 3' "!' 859""48 ' @9 59' @+!+' 8+ ' 28 3+' 76' 5 ' " ' " .!+88' $>&$' 9+8+' 2B" +3' "' = #P# ;=0' 25!+8 ' 9+' + 274 .' 25 ' "!' 9+' 23B 88 " ' " ' ! I" 2' 28' 2' 8 2 +' 1!"D 3+8' "!' 9+' ! 9+!' .!2 ' "' 8+5 " 8' Q' 2 3' ;Q' ' +259' "@ 89 1 ' @9 59/ @" 43' 3" 74+' 9+' .!2 ' "!' 859""48 ' 9!++' B 44 " ' 25!+8' " ' 42 3' 2!+' 248"' 211!"1! 2 +3' "' 126' 9+' 3+7 8' " ' 9+' +!! 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QP' 3 ! .' 9+' 1!+5+3 .' 6+2! ' dQP' 1+!' 1 1' "!' 8 59' +J5+88' 9+' B" +6' @9 59' !+B2 8' 8' "' 7+' 211"! " +3' 2B" .' 9+' 3 8 ! 5 8' @9 59' 92D+' 89"@ ' "!' &' B" 98 ' 2 ' 5!+28+' ' 9+' 2D+!2.+' 32 46' 2 + 32 5+' "D+!' 92 ' " ' 9+' 1!+5+3 .' 6+2! ' 6' 81+5 24' 3 8 ! 5 ' 2J2 " ' 28' @+44' 28' 244' +8' 5"44+5 +3' "!' 9+' D "42 " ' " ' 4"524' "!3 C 2 5+8 ' ."' "' 9+' 3 8 ! 5 ' @9+!+' 5"44+5 +3' "8 ' " ' 9+' 5" 6' 3 8 ! 5 8' 4+D6' "' 4"524' 2J' 9+' ! I" 2' 211"! " B+ ' 142 ' 8' 7+ +!' +D+ ' 92 ' 92 ' ' 24 "! 2' ."" 3' 28' 8' 9+' 42 +!' 2 3 ' 4 A+' 24 "! 2' ' 8 !+8' 2' ."" 3' 859""4' 2 3' 2' ."" 3' +259+!' "!' +D+!6' 3 8 ! 5 ' ' 9+' 8 2 +' ' 9+' " 24' 859""4' !+D+ +' $& #Q' 1+!' 5+ ' 5"B+8' !"B' 1+!B 2 + ' 38' 2 3' !+ 8' Q# #< 1+!' 5+ ' !"B' 8 2 +' 2J2 " ' P0 <=' 1+!' 5+ ' !"B' 4"524' 2J2 " ' 2 3' P <P' 1+!' 5+ ' !"B' B 85+442 +" 8' 8" !5+8 9+' " 24' +J1+ 3 !+' "!' 859""48 ' 3 ! .' 9+' 428 ' 6+2!' "!' @9 59' !+1"! 8' 2!+' 2D2 4274+' @28' d0&0 #;$' 9 8' @28' +R 24' "' 2 ' +J1+ 3 !+' " ' dP #< 1+!' 521 2' " ' 9+' " 24' 1"1 42 " ' 28' 2.2 8 ' d= Q0' "!' 9+' ' ' 28' 2' @9"4+' 9+' 2D+!2.+' +J1+ 3 !+' 1+!' 1 1 4' 1+!' 326' ' 2D+!C 2.+' 32 46' 2 + 32 5+' @28' ; ; &=' 5+ 8 ' 28' 2.2 8 $< >' 5+ 8' "!' 9+' ' ' 28' 2' @9"4+' 2 3' Q0 ;' 5+ 8' "!' 9+' +8 +! ' D 8 " ' "! 9' 2A" 2 ' " 2 2 ' 2 3' +D232' 24" +' 81+ ' B"!+' 9+' 24' 6+2!46' +J1+ 3 !+' 1+!' 1 1 4' ' 2D+!2.+' 32 46' 2 + 32 5+' @28' d=P ;$' 2 ' 2B" ' +J5++3+3' 76' " 46' Q' 28 +! ' 2 3' P' +8 +! ' 8 2 +8' 259' 23 4 ' B24+' ++38' "' 5" ! 7 +' 7 ' 0Q' 5+ 8' "' 1!"3 5+' d$ "!' +259' 59 43' P' "' $>' 6+2!8' " ' 2.+' ' 9+' 8 2 +' 28' 2.2 8 ' d$ #Q' "!' 9+' ' ' 28' 2' @9"4+' 9+8+' . !+8' 89"@' 2' 9 .9' 1+!' 1 1 4' +J1+ 3 !+' " ' 2' 4"@' 1+!' 521 2' 5"8 ' 9 8' 8' 3 +' ' 12!' "' 9+' 42!.+' 1+!' 521 2' @+24 9' " ' ! I" 2' 2 3' ' 12!' "' 9+' 42!.+' +J5+88' " ' 23 4 ' B24+8' ! I" 2' 928' B23+' D+!6' !21 3' 1!".!+88' ' +J1+ 3 !+8' @ 9

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76 9+ 1!"D 8 " 8 " 9+ +48" 3 5!+2 +3 76
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!+5+ D+8 d$P ### 2 6+2!F 2 3 3+! 9+ 32B8
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864D2 2 2 3 +@ :+!8+6 5"B7 +3 "!
23B 8 !2 D+ 1 !1"8+8 9+ 8 2 + 8 3 D 3+3
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$>Q# 2 3 $>;# 2523+B6 @28 592! +!+3
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" 4+28+ 9+B 2 3 1!"D 3+3 92 2 6 5"B+
!"B 9+ 42 38 89" 43 7+ 8+3 3+! 9+
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+259 "@ 89 1F 2 3 B23+ 1!"D 8 " "! 9+
+J2B 2 " " +259+!8 "!2 = B" 98 859""4
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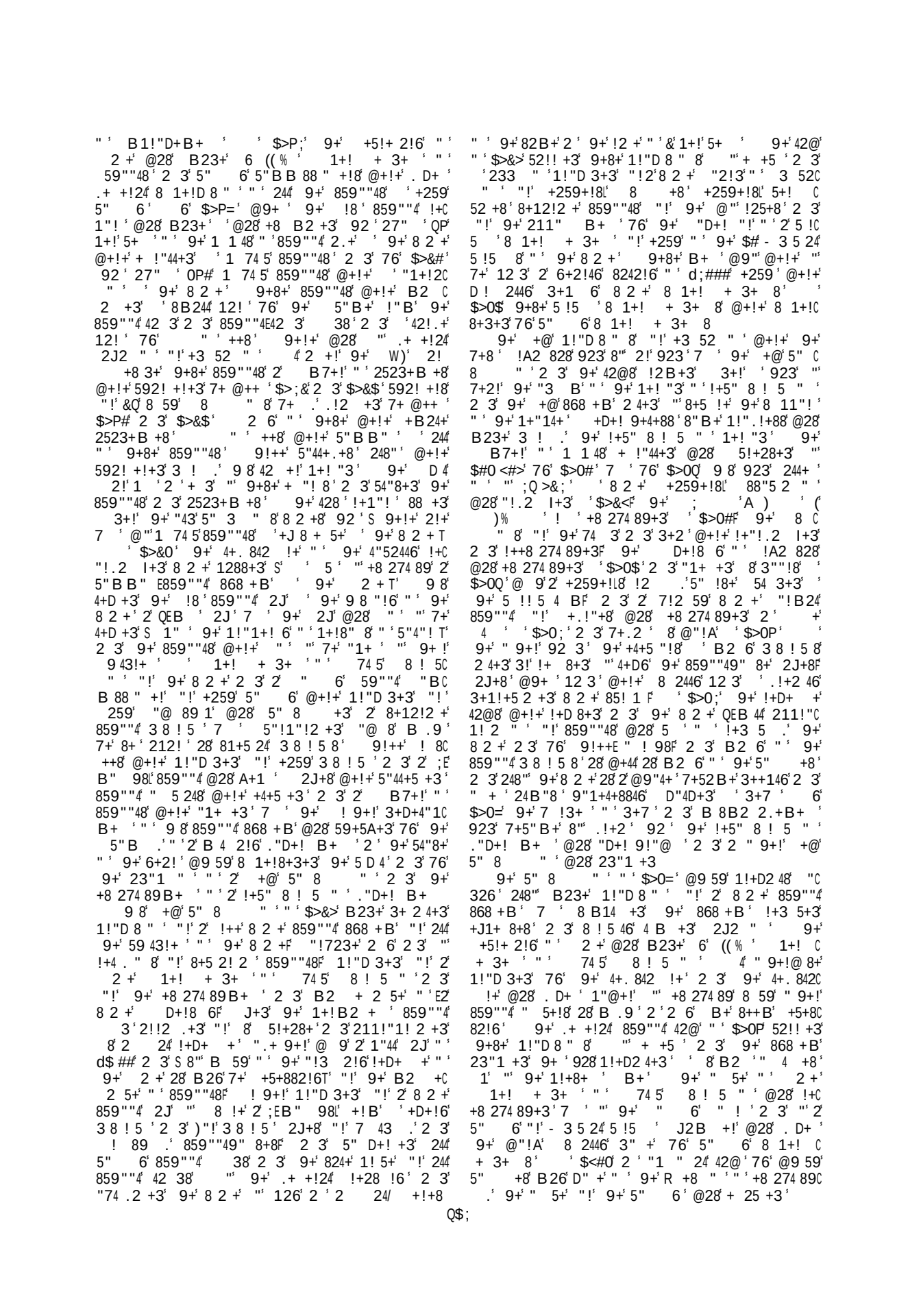

$><< 2 8 B 42! "1 " 24 42@ @28 1288+3 76 @9 59 2 6 5" 6 B26 D" + 9+ R +8 " 5" 6 "!B 6 " +J 7""A8 $<#Ø 9+ !8 3+1+ 3+ 8 2 + "!B24 859""4 @28 1!"C D 3+3 "!

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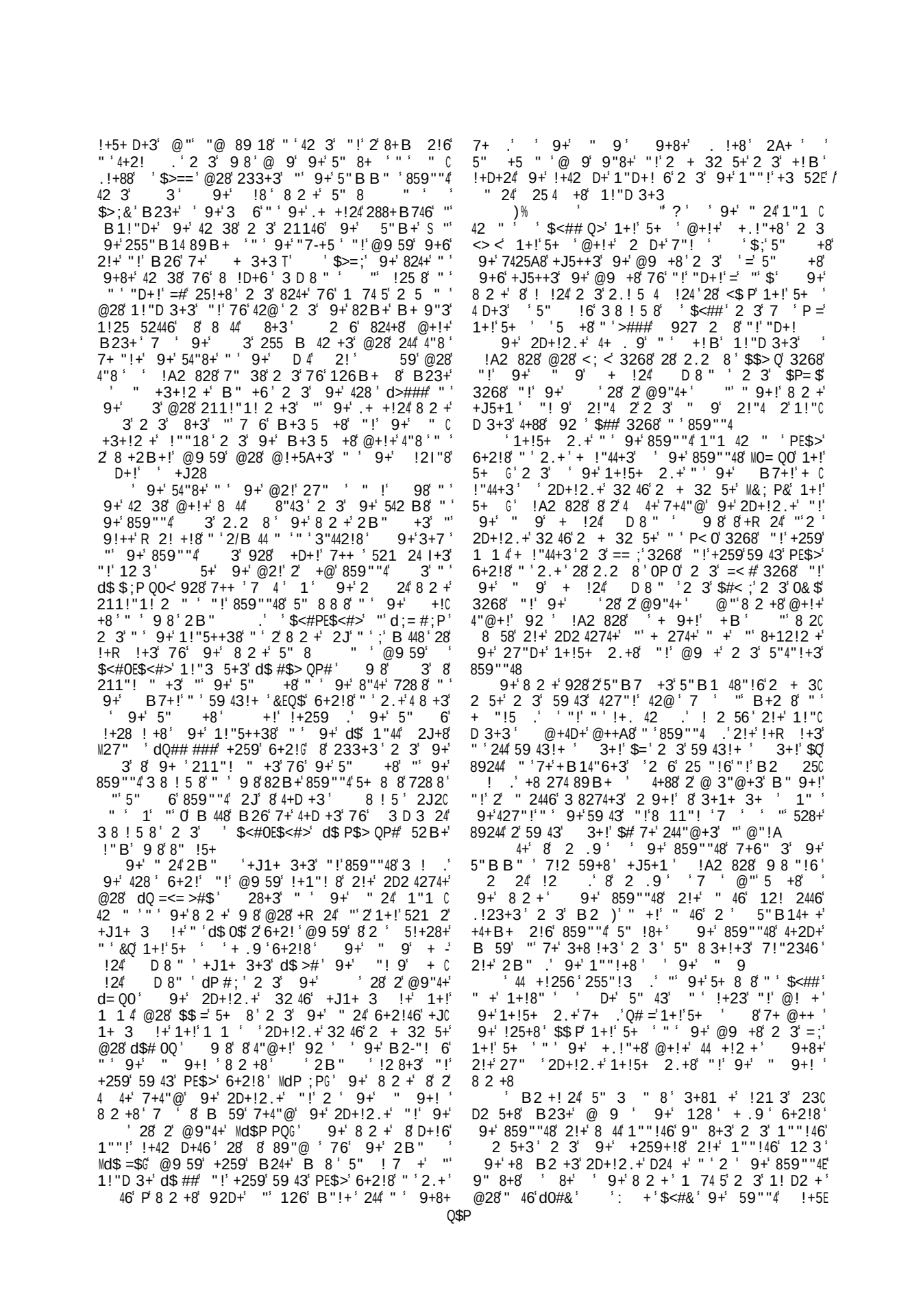

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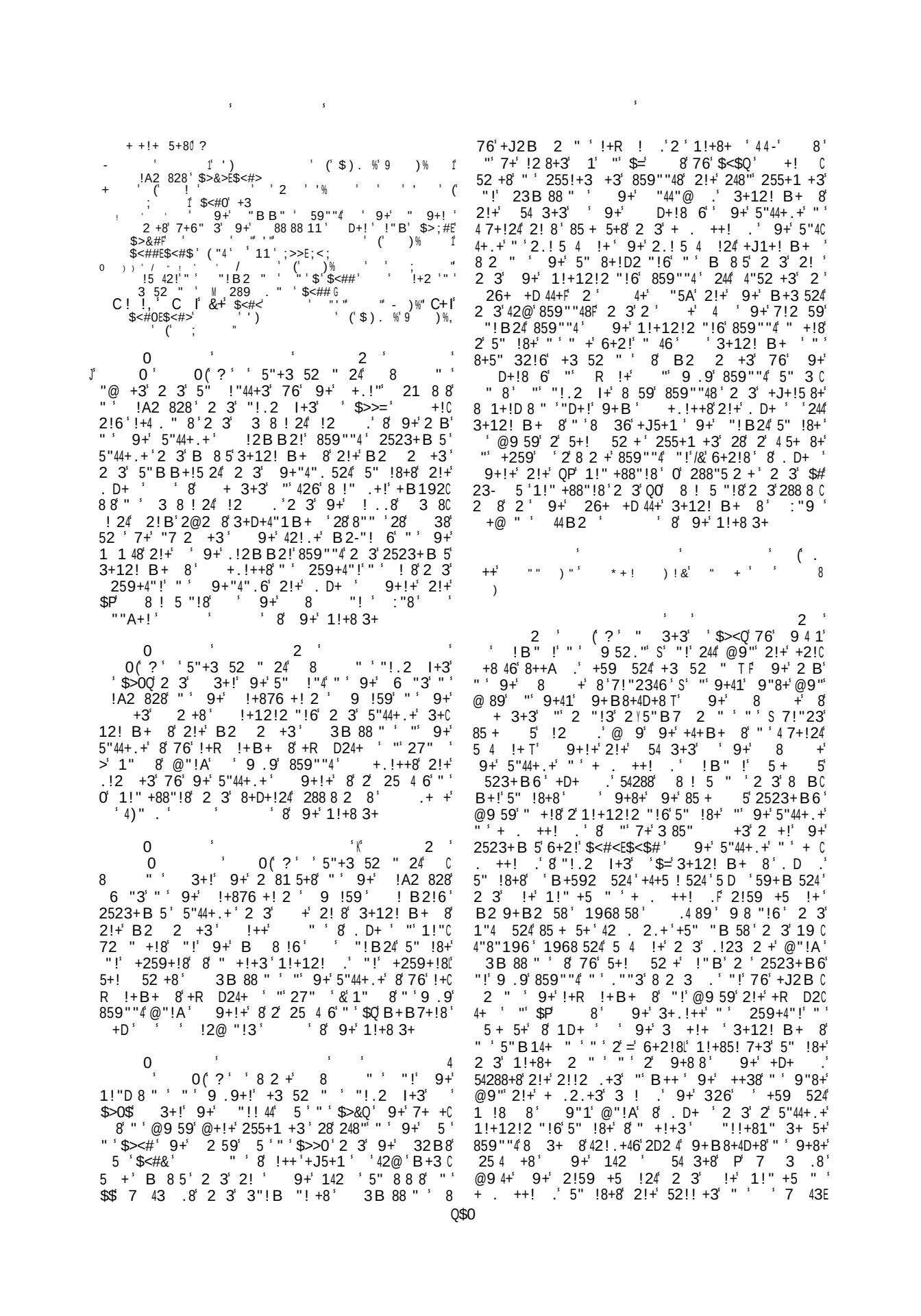

ings at some distance from the main institute. The laboratories contain the most modern equipment, and afford excellent facilities for research. The library contains 25,000 volumes, 2500 pamphlets and 150 periodicals, and is primarily a reference library for engineering students. Among the publications of the Institute are the *Armour Engineer*, a semi-annual technical publication, and the *Integral*, an annual publication edited by the junior class. The Chapin Club, organized in 1907, has for its object the promotion of the social interests and welfare of the students. In 1908–1909 the students were distributed as follows: in engineering — 170 in electrical, 141 in civil, 104 in mechanical, 45 in chemical, 17 in fire protection; in architecture, 100; special students, 21; 615 students took evening classes. The faculty includes 12 professors, 11 associate professors, 12 assistant professors, and 25 instructors. The value of the plant is estimated at $5,000,000; the productive endowment is $1,500,000, and the annual income is $215,000. Frank Wakeley Gunsaulus, D.D., LL.D., is the President.

ARMSTRONG, SAMUEL CHAPIN (1839–1893). — The organizer of the Hampton Institute, for negroes and Indians, was born on the Hawaiian islands, of missionary parents,

General S. A. Armstrong.

Jan. 30, 1839. He received his preliminary education in the Oahu College, Hawaii and was graduated from Williams College. For several years he was connected with the department of public instruction of Hawaii, where he obtained the expert knowledge of the educational needs of backward peoples which was subsequently of so much value to him in his work among the negroes and Indians. He was at the head of a colored regiment during the Civil War, retiring at its close with the rank of brigadier-general. He was selected by General Howard as superintendent of education of the Freedmen's Bureau (*q.v.*) for Virginia. Two years later (1868), realizing the industrial needs of the colored people, he organized the Hampton Normal and Agricultural Institute (*q.v.*), the parent of many such institutions in America. During the 25 years that he directed Hampton (1868–1893), General Armstrong practically fashioned the educational policy of the native Indians and the negroes, and the men and women that he trained became the leaders among their own people. He was the author of several papers on the education of negroes and Indians.

W. S. M.

See HAMPTON INSTITUTE.

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TALBOT, EDITH ARMSTRONG. *S. C. Armstrong. A Biographical Study.* (New York, 1904.)

See articles in *Atlantic Monthly*, Vol. 73, p. 90; *Educational Rev.* Vol. 6., p. 105.

ARNAULD, ANTOINE. — After St. Cyran (*q.v.*) the most important member of the Port-Royal (*q.v.*). Born in 1612, the son of a lawyer, he was early destined to enter the same profession as his father. He changed, however, from law to theology. He obtained the doctorate in 1641, and entered the Society of the Sorbonne in 1643. In the same year he wrote his *Livre de la fréquente communion*, which brought upon him the enmity of the Jesuits, who persecuted him for the rest of his life with their attacks. Arnauld was a strong defender of Jansenism. In 1656 he was excluded from the Sorbonne. In 1648 he had joined the Port-Royalists. Although he did not teach, he expresses a keen interest in education, and wrote a *Memoir on the Regulations of Studies in the Humanities* (*Mémoire sur le Réglement des Études dans les Lettres humaines*). Many of his writings were on school subjects, and many others he inspired. Among these are the *General Grammar* (*Grammaire Générale*), 1660; *Elements of Geometry* (*Éléments de Géometrie*), 1660–1661; the treatise on Logic (*Logique*), 1662. In 1679 Arnauld was compelled to leave France, and spent the rest of his days in Belgium, like so many of his friends, trying to find a new home. He died in Brussels in 1694.

See article on PORT-ROYAL.

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ARNDT, ERNST MORITZ (1769–1860). — A German patriot and poet. Born at Schoritz

Thomas Arnold. (See p. 220.)

Matthew Arnold. (See p. 219.)

Thomas Carlyle. (See p. 533.)

Lord Chesterfield. (See p. 596.)

A Group of English Men of Letters — Writers on Education.

@! .8 "' 9+'8 7-+5 '" '+3 52 " ' !"B'@9 59' 9+6'@" 43' " 9+!@ 8+'92D+'89! A' !"B' 425A' " ' +!+8 ' 8"!3 2!6'1!+8+ 2 " ' 59' " ' 9+'23B 8 !2 D+' +!+8 ' '1 74 5' +3 52 " ' @9 59' 7+52B+' " 5+274+' ' .42 3' ' 9+' 428 ' @+ 6'6+2!8' " ' 9+'!+ . '" ' _ ++ ' (5 "! 2' B26' '12!' 7+' !25+3' "' 9+'4 +!2!6' 4 + 5+' " ' 2 9+@' ! "43' MQG' +' ""A' 3+4 .9 ' ' BA43 .' 9 8' +44"@' 5" !6B+ ' ++4' 2892B+3' 76' 5" !28 .' 9+' B+2.+!' +3 52 " 24' 25 D +8' " ' 9+' .4 89' 2 +'2 3' 9"8+' " ' !2 5+' +!C B2 6'2 3' " 9+!'5" + 24' 1+"14+8' 2D .' .!"@ ' 1' 2 ' 2' B+' @9+ ' 9+' .4 89' 2 " ' @28' 8 !" .46' 8+4 E5" 3+ ' 2 3' 4 4+' 54 +3' "' 23B ' 9+'8 1+! "! 6' " ' 2 6' "!+ . '868 +B' " '8"5 24' "!.2 I2 " ' ! "43' 3 4.+3' 9 B8+4 ' ' 9+' "11"8 +' 927 ' 2 3' 3+24 I+3' "!+ . ' 868 +B8' " ' +3 52 " ' 2 3' ."D+! B+ ' 12! 46' /@ 9' 9+' + " ' " ' B1!+88 .' 9 8' +44"@' 5 C I+ 8' @ 9' 9+' ++3' "! !+ "!B ' 12! 46' !"B' 2' 2 !24' + 3+ 56' "' 8++' 9+'@+2A'8 3+' " ' .4 89' 927 8' " ' B 3' 2 3' "' "D+!+8 B2 +' 9+' B+! 8' " ' " + 24' B+ 9"38' " '+3 52 " ' M;G +' @28' " +' " ' 9+'4 +!2!6'4+23+!8' " ' 9+'!+25 " ' 2.2 8 ' 3 D 3 24 8B' ' .4 89' 2 " 24' 4 +' 2 3' 2.2 8' 9+' 4 + 5+' M@!" .46' 3+ +3' 76'9 B'@ 9' ! 2 8BG' @ 59' B B I+3' 9+' 5 " 8' " ' 9+' 2 +' ' 1!"B" .' 5"44+5C D+' @+44E7+ .' 76' B+2 8' " ' 1 74 5' +3 52 " ' 2 3' 8 2 +E2 3+3' 5 4 !+' 2 9+@' ! "43L8 4 + 5+' @28' 5!+28+3' 76' 9+' 25 ' 92 ' 9+' @28' 9+'8" ' " ' 9+' B2 '@9"' 923' 7++ ' 9+'59 + ' !+ "!B+!' " ' 9+' .4 89' 1 74 5' 859""48' ! 4C 4 2 ' '4 +!2!6'5! 5 8B ' 2' B28 +!' " '1"4 524' !" 6'1"4 +46' 1 4+88' ' 9 8' 82 !+' " ' .4 89' 8"5)' 2 3' +44+5 24' 1!+- 3 5+' 9+' 9+41+3' ' B2A .' .42 3' 8+4 E5" 85 " 8' 3 882 8 +3' @ 9' 8+4 'D2. +46'5"44+5 D 8 ' ' 8'+3 52 " 24' 3+24' 2 3' !+236' "' 255+1 ' B B+ 8+' 3+D+4"1C B+ '" '1 74 5'+J1+ 3 !+'2 3' " '8 2 +' 81+5C " ' ' +3 52 " 24' @"!A' 8' 4 + 5+' @28' 8"4D+ ' 8+ 4 .'1!"D"52 D+' @ 9' 2' 5+! 2 ' "!+ . '8 !2 ' ' ' @9 59' @+ ' @ 9' 2' 425A' " ' 8 .9 ' "' 9+' 9 8 "! 524' 8 . 52 5+' " ' B2 6' 1" 8' " ' D +@' !23 " 2446' 255+1 +3' ' .C 42 3' ' "!+ . '859""48' 2 3' 1"4 524' 8 C " 8' 9+' @28' 2 ' B1!+88 " 274+' "78+!D+!' !2 9+!' 92 ' 2' 82.25 " 8' 5! 5' +' !2!+46' 8 ! 5A' 2' ! +' 7242 5+' 7+ @++ ' 9+' 82 8 25 "!6' 2 3' 9+' B 859 +D" 8' !+8 4 8' " '2 6' "!B' " '."D+! B+ 24' 5" !"4' '+3 52 " F 9+' @28' 2' 7! 44 2 ' B1!+8C 8 " 8' !2 9+!' 92 ' 2' 85 + 5' D+8 .2 "!' +' 3+24 I+3' 9+' 25 " ' " ' 9+' 2 +' @ 9" ' B+28 ! .' 9+' 1!25 524' + +5 8' " ' "!.2 I+3' 7 !+2 5!256' '9 8' 1"4 524' 3+24' 9 8' 2 9+!8' 24B"8' +7!2 5' 9+"5!256' 923' 23+3' "' 2' 8"B+@92' 3 4+ 2 +' 23B !2 " ' "!' ."D+! C B+ 24' 25 " ' "!' B2 6' " ' 9+' 1!25 524' !+8 4 8' " ' @9 59' 9+' @" 43' 9 B8+4 ' 92D+' +4 ' 1!" " 3' 3 8 28 +' "!' 9+' B"!+' 85 + 5' 8 36' " ' +3 52 " 24' B+ 9"38' 28' 2114 +3' "' 9+' 1!"74+B8' " ' +259 .' 9+' 89"@+3' 5"B12!2C D+46' 4 4+' 21 3+' ' !+81" 8 74+' " 5+!' " ' 9+' 3 52 " ' +12! B+ '3 ! .' 9+'6+2!8' ' @9 +9' 9+' 868 +B' " ' S' 126B+ ' 76' !+8 4 8' T 3++146' - !+3' 9+' @"!A' " ' 9+' 7+8 ' .4 89' +4+B+ 2!6' 859""48' 9+' 3 3' 5"B12!2 D+46' 4 4+' +D+ ' 9 8' 1 74 5' @! .8' 2 3' 8 44' 4+88' 76' 1+!8" 24' 4 + 5+' 2 3' 1!" +8 ' "' 59+5A' 23C B 8 !2 D+' + 3+ 5 +8' @9 59' @+!+' 9 ! 4' "' 9+' 7+8 ' +!+8 8' " ' .4 89' +4+B+ 2!6' +3 52C " ' ' "' .4 89' @! +!' " '9 8' B+' @ 9' 9+' +J5+1 " ' " ' +!7+!' 1+ 5+!' #:" "& 2 3' 1"88 746' " ' J4+6' #:" "&1' 3 3' 8"' B 59' '1"1 C 42! I .' 9+' 3 85 88 " ' " '+3 52 " 24' 1!"74+B8' +' 211!"259+3' 9+B' 9"@+D+!' !"B' 9+' 1" ' "'D +@' " '1"4 524' 19 4"8"196' 2 3' ."D+! B+ ' !2 9+!' 92 ' !"B' 9+' 8 2 31" ' " '18659"4".6' "!' 1968 "4".6' +' 9" .9 ' !2 9+!' 4""8+46' 27" ' "!B8' " ' 1 74 5' 5" !"4' '+3 52 " ' 2 3' @9 4+' @+2A+ .' !+81+5 ' "!' 3 D 3 24' + +!1! 8+' 9!+@' 7 ' 4 4+' 4 .9 ' 1" ' 9+' 3+C +5 8' " ' "!.2 I+3' 3+B"5!256' ' 9+' 819+!+' " ' +3 52 " 24' ."D+! B+ ' +' @28' 8 !" .46' BC 1!+88+3' 76' 9+' 259 +D+B+ 8' " ' +!B2 6' ' 9+' 1 74 5' 1!"D 8 " ' " ' 8+5" 32!6' 2 3' 9 .9+!' +3 52 " ' 7 ' 3 3' " ' 1!+88' "' 2 6' 1" ' " ' 9"!" .9 +88' 9 8' R !6' "' 9+' 32B+ 24' 3 +!+ 5+8' 7+ @++ ' 3 +!+ ' "!B8' " ' 2 " 24' "!.2 I2 " ' 8' 2 ' +3 52 " 24' @! +!' 9 8' 59 + ' 8+!D 5+' "' .42 3' 426' ' 9 8' !+ +!2 +3' 2 3' !.+ ' 23D 5+' ' !+.2!3' "' 9+' 1!"D 8 " ' " '2' 4 7+!24' 8+5" 32!6' +3 52 " ' "!' 9+' B288+8' " ' 9+' 1+"14+F' 7 ' 8' 25 +D+B+ 8' 28' 2 '+3 E' 52 " ' A+!' @+!+' " ' 2' B 59' 4"@+!' 142 +' 92 '9 8' @"!A' '1"+ !6'2 3' '4 +!2!6'5! 5 8B ' '

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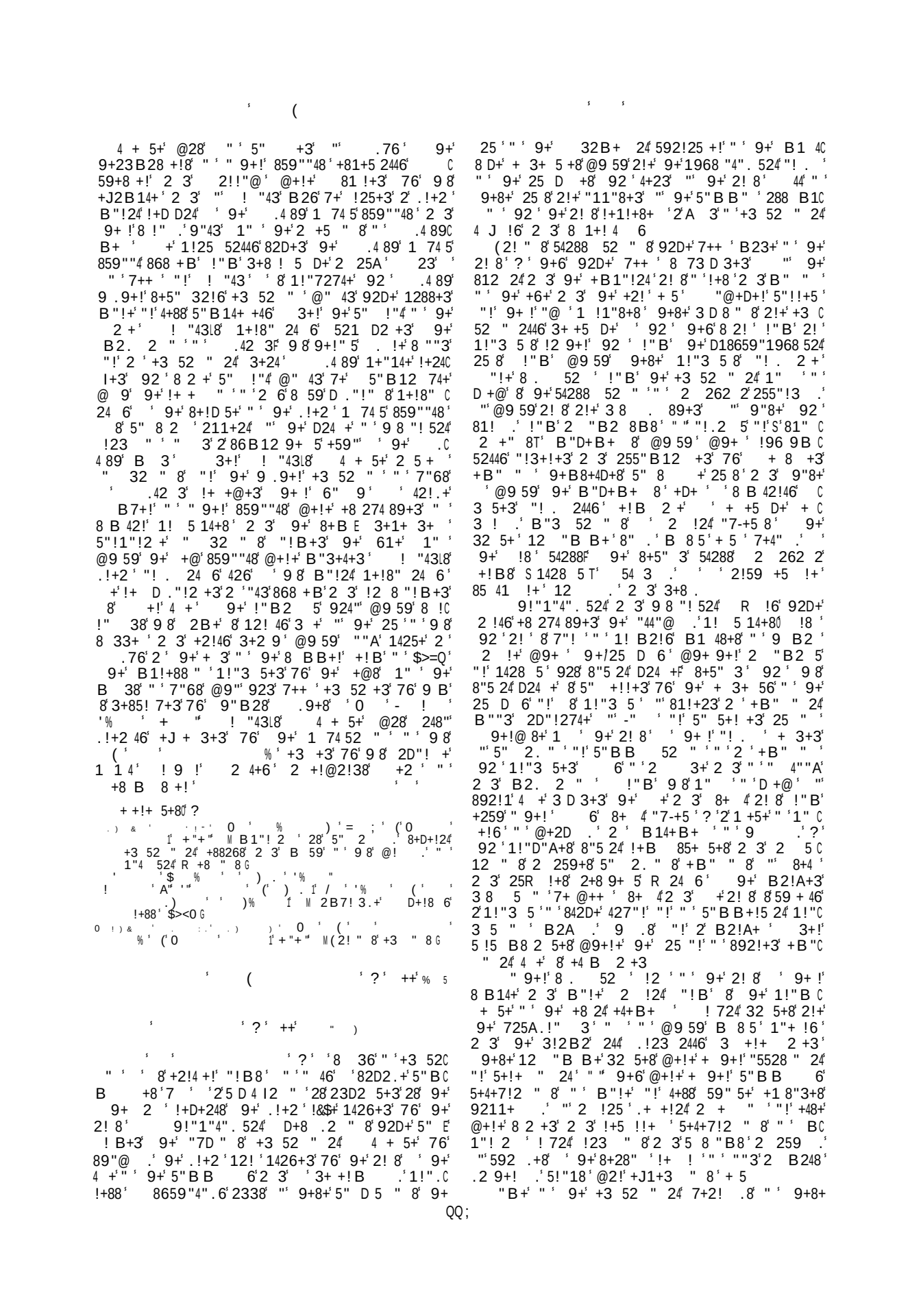
' ' M$0<PE$>=QG' ?' +23C B28 +!' " ' .76' 59""4' $>Q>E$>=QF' @28' 7"! ' 2' "@+8' ' 9+' 84+' " ' .9 ' @9+!+' 9 8' 2 9+!' @28' "44+5 "!' " ' 9+' 8 "B8' +' @28' +3 C 52 +3' M$>#;E$>#0G2' 2!B 8 +!' M@9+!+' 9+' @28' B 59' 4 + 5+3' 76' !+23 .' :"8+19' ! +8 4+6L8' %) ' ' / &' 2 3' 2 ' 59+8 +!' "44+.+' M$>#0E$>$$G' !"B' 8' 59+8 +!' +J1+! + 5+' 9+' 3+! D+3' B2 6' " '9 8' 3+28' 28' "' 859""4' 3 85 C 14 +' 2 3' 28' "' 9+' 7+ + ' " ' ! 8 .' +43+!' 7"68' '2'859""4'@ 9'2 9"! 6'"D+!' 9+'6" .+!' +' 8' 2! 54+' " ' 9+' 3 85 14 +' " ' 1 74 5' 859""48' '$>;P' 59+8 +!' !23 " 8' M2B" .' 9+' B"8'2 5 + ' ' .4 89' +3 52 " G' 42!.+46' 4 + 5+3' ! "43' @9+ ' '42 +!' 6+2!8' 9+' !+C "!.2 I+3' 9+' 859""4' 4 +' 2' .76 ' $>$$' '9 8' 8 J ++ 9' 6+2!' 9+' @28' +4+5 +3' 59"42!' " ' "!1 8' 9! 8 ' "44+.+' J "!3F ' $>$=' 9+' @28' 1425+3' ' 9+' !8 ' 54288' '

/) " 8 2 3+!.!23 2 + 2 "!1 8 9+ 7+52B+ 9+ B2 + ! + 3 : "4+C ! 3.+ 2 3 :"9 +74+ 9!" .9 "4+! 3.+ ! "43 7+52B+ 25R 2 +3 @ 9 9+ % - 2 3 9+ !8 +3 " "!38@"! 9l8 1"+B8 9+ 6" . B+ 7+52B+ I+24" 8 3 85 14+8 " "!38@"! 9l8 19 4"8"196 9+ +259 . " 9+ 2A+ 1"+ 8 7!" .9 " ! "43 @9" 923 2 2 !24 4+2 . "@2!3 1!25 524 2 3 +D 3+ 46 8+ 4 8 3 +8 2 ++4 . "! 4" 6 2 3 B2. 2 D+ 9" .9 8 @9 59 923 2 .!+2 81 ! 24 4 + 5+ 1" 9 8 4 + ! "43 ""A 12! 5 42!3+4 .9 4" ."5" !6 !2B74+8 9+ 7+2 +8 " 2 !+ 2 3 9+ 8+2 2 3 89 11 . 4@268 B1!+88 " 274+ 2 3 8+ C 8 746 592 . . 9 8 1" " D +@ 3+! 9+ 3"B 2 "1 " 8 " 9 8 B+ "! " D24 +3 ! + 38 ! "43 "@+3 B 59 " 9+ 4 + 5+8 " 9 8 +2!46 +3 52 " 2 59+8 +! 2 3 JC "!3 9+ + +5 8 " @9 59 @+!+ +D+! + 25+3 !"B 9 8 B 3 2 3 592!25 +! +D 3+ 46 "7 2 +3 B"!+ D24 274+ +3 52 " !"B 9 8 5" +B1"!2! +8 +81+5 2446 2 5"44+.+ 2 3 !"B 9 8 1! D2 + 8 3 +8 92 !"B 9+ 25 24 8 ! 5 " @ 959 9+ !+5+ D+3 !"B 9 8 "!8 +9 8 4+2! +3 " 211!+5 2 + 9+ +3 52 " 24 D24 + " 5"!1"!2 + 2 3 5"44+. 2 + 4 + 2 3 " 288 . 2 9 .9 D24 + " 9+ 4 + 5+ " 2 859""4 5"B B 6 1" +259 " 8 3 D 3 24 B+B7+!8 $>$P 9+ @28 +4+5 +3 +44"@ " ! +4 "44+.+ 9+ 9+ 5+ +! " 9+ B"8 25 D+ +44+5 24 4 + 9+ D+!8 6 +!+ 9+ 7+52B+ 25C R 2 +3 @ 9 592!3 92 +46 M2 +!@2!38 !597 89"1 " 74 G 2 3 :"9 + !6 +@C B2 2 3 " 3 9 B8+4 F 9+ D"! +J " 9+"C 4". 524 3 85 88 " 2A . "46 !3+!8 $>$> 9+ 8+ 4+3 9+ "44"@ . 6+2! 2 24+E 92B M" 9+ 72 A8 " 9+ 92B+8 +2! 2 +8 @ 9 9 8 B" 9+! 2 2 3 8 8 +! +!+ M92DC . B2!! +3 2!6 + !"8+ $>Q#C 9+ !+C B2 +3 "! +6+2!8 2A . 8+D+ "! + .9 6" . B+ 28 1! D2 + 1 1 48 1!+12!2 " "! 9+ ! D+!8 6 4 + 7"69""3 2 3 +2!46 6" 9 9+ 923 7++ 8"B+@92 3"4+ B"!7 346 !+8 4+88 21 " 3 4.+ 9 B8+4 D2. +859+B+8 @ 9" 3+ +1 !1"8+ 2 3 7+8+ 76 +4C 4+5 24 3" 7 8 28 " 9+ !+24 +8 " !+4 . " 8 7+4 + ! . 9 8 4 + 2 24+92B 9+ 3+!C @+ 2 .!+2 592 .+ D 8 . B 59 2B" . 9+ 1""! 7+5"B . + 8+46 !+4 . " 8 2 3 "!B . 927 8 " 3+ 2 .274+ 3 8 !6 2 3 1+!8+D+!C 2 5+ S 9+ B"8 !+B2!A274+ 9 . T @!" + 2 "!B+!1 1 4 S @9 59 8 ! 5A B+ 2 " 5+ " -" . 9+ 24+92B 5 !54+ @28 9+ @" 3+! 4 9+24 9 +88 " " +2 3 ++4 . @9 59 1!+D2 4+3 D+!6 9 . 27" B+ B B+3 2 +46 " 3 " 7+ B"8 !+24 @28 2 1425+ @9+!+ 2 +@5"B+! 2 " 5+ +4 92 2 .!+2 2 3 +2! +8 @"!A @28 . . "!@2!3 ! ! "43!8 .!+2 1"@+! 28 2 1! D2 + "! !+8 +3 9 8 92 9+ .2D+ 8 59 2 E + 8+ +2! +8 +88 " 4 + T 9 8 2 24+92B ! "43 3+D+4"1+3 9 8 .!+2 1"@+!8 28 2 +259+! " 6" . B+ M9+ @28 24@268 B"!+ 8 55+88 4 @ 9 "43+! 7"68 92 @ 9 6" . " +8 2 3 9 8 + 8+ !+24 6 " !+4 . " 8 2 3 1"4 524 5" D 5 " 24+C 92B 248" 9+ 7+.2 9 8 !8 +3 " " 9 56C 3 3+8 2 3 9 8 8 3 +8 9+ 9 8 "!6 " !++5+ 2 3 "B+ $>QP "!3+! " !+23 +C 7 9!l8 / (1 9+ 4+2! +3 +!B2 9+"5!2 5 9 8 8 5 8 9+ 3+8 !+3 " 211464 9+ 1! 5 14+8 " 9+ "81+4 " 9+ 4+. 842 " 2 3 23B 8 !2 " " 9+ B"3+! 2 + "11"8+3 9+ R + 8! 2 3 +44+5 124 +! 2 " 9+ D2 .+4 5248 2 3 9+ + 3+ 56 " 9+ !25 2! 2 8 " 8+12!2 + 9 !59 !"B 2 + 8 3+24 @28 2 1"4 524 5"B B 6 +!1+ + !2 +3 76 9! 8 2 1! 5 14+8 2 3 21146 . 9"8+ 1! 5 14+8 8 42@8 2 3 23C B 8 !2 " ? 9+ 42 +! 54 3 . 2 868 +B " 2 " 24+3 52 " +5+B7+! $>Q0 9+ @28 +4+5 +3 9+23C B28 +! " .76 + " 9 8 ! + 38 ! 2@A 8 2 +!@2!38 !"D"8 " ! +4 1!+3 5 +3 92 ! "43 @+!+ +4+5 +3 " 9+ 9+23B28 +!E 89 1 " .76 9+ @" 43 592 . + 9+ 25+ " +3 52 " 244 9!" .9 9+ 1 74 5 859""48 " .42 3 . 8 $>Q> 9+ + +!+3 1" 9 8 +@ " 4 5+ 9+ 9+ 7+52B+ 9+23B28 +! " .76 9+ " 3 2 .+ +!24 ++4 . " 3 8C 82 8 25 " @ 9 9+ 5" 3 " " 9+ 1 74 5 859""48 9+ "43+! 54288 524 5 !! 5 4 B @28 D+9+B+ 46 2 25A+3 " 9+ .!" 3 " 8 2!C !"@ +88 2 3 4 6 9+ 278+ 5+ " 868C +B2 5 2 +B1 8 2 9! 8 2 +3 52 " 9+ 1 74 5 859""48 923 7+5"B+ 2 852 324 9+ +6+8 " !+4 . " 8 B+ 2 6 9" .9 92 9+ @9"4+ 868 +B @" 43 8"" 7+ 3+8 !"6+3 @28 54+2! 92 2 .!+2 !+ "!B2 " @28 +5+882!6 2 3 92 9 8 @" 43 7+ +J !+B+46 3 5 4 "@ . " 9+ 5" 8+!D2 8B " 9+ C 8 " 8 5" 5+! +3 ! "43 3+ +!B +3 92 9+ @" 43 3+D" + 9 8 4 + " 9+ +! 24 !+C "!B " 9+ .!+2 1 74 5 859""4 " 9+ !2 8 . " 8 3+248 " 5"!1"!2 + 4 + " 59+5A . 9+ 9" .9 4+88 @28 + 2 3 8+4 89 +88 " 859""4C 7"68 2 3 " 5 452 . " 9+ ! B 38 9+ 1! 5 14+8 " !+D+!+ 5+ "! 9+ 42@ 2 3 !+.2!3 "! 9+ 542 B8 " 9+ 1""!+! 54288+8 + 9+!+C "!+ D +@+3 9 8 23B 8 !2 " 2 .76 28 2 1"4 524 +J1+! B+ " 2!E!+259 . B1"! 2 5+ 8 + +!.6 @28 7" 34+88 9+ 9!+@ 9 B8+4 D+9+B+ 46 " 2 5" +8 2.2 8 +D 4 " C 85 " 8 " 9 8 "@ +.! 6 2 3 5" +B . @"!4346 23D2 2.+ 9+ @28 7"43 1"4 56 !+.2!34+88 " 2 25A8 "!+ 92 " 5+ 9+ !+8 8 +3 9+ 2 +B1 8 " 9 8 ."D+! . 7"36 " +! +!+ @ 9 9 8 3+1+ 3+ 5+ " 25 " 9+ 8 8 +3 1" 92D . 5"B 14+ 5" !"4 "D+! 9+ 23B 8 !2 " " 9+ 859""4 2 3 "D+! 9 8 "@ 1! D2 + "55 12 " 8 + 542 B+3 2 3 +J+!C 5 8+3 5"B 14+ 4 7+! 6 " "1 " 2 3 25 " !+.2!3 " 5 !!+ 1"4 58 2 3 @28 2 " + B+ +2!46 3 8B 88+3 !"B 9+ 9+23B 28 +!89 1 "! 244+.+3 1"4 524 12! 82 89 1 9+ !++3"B @9 59 ! "43 542 B+3 @" 43 92D+ 7++ B1"8C 8 74+ 3+! 2 6 868 +B " 9 .9+! +3 52 " 3 !+5 46 5" !" +3 76 9+ 2 + 8 "1+ C +88 " 81++59 " 5 !!+ R +8 " 8 " 1"4 524 5" !"D+!86 2 3 9 8 D ."!" 8 12! 5 12 "



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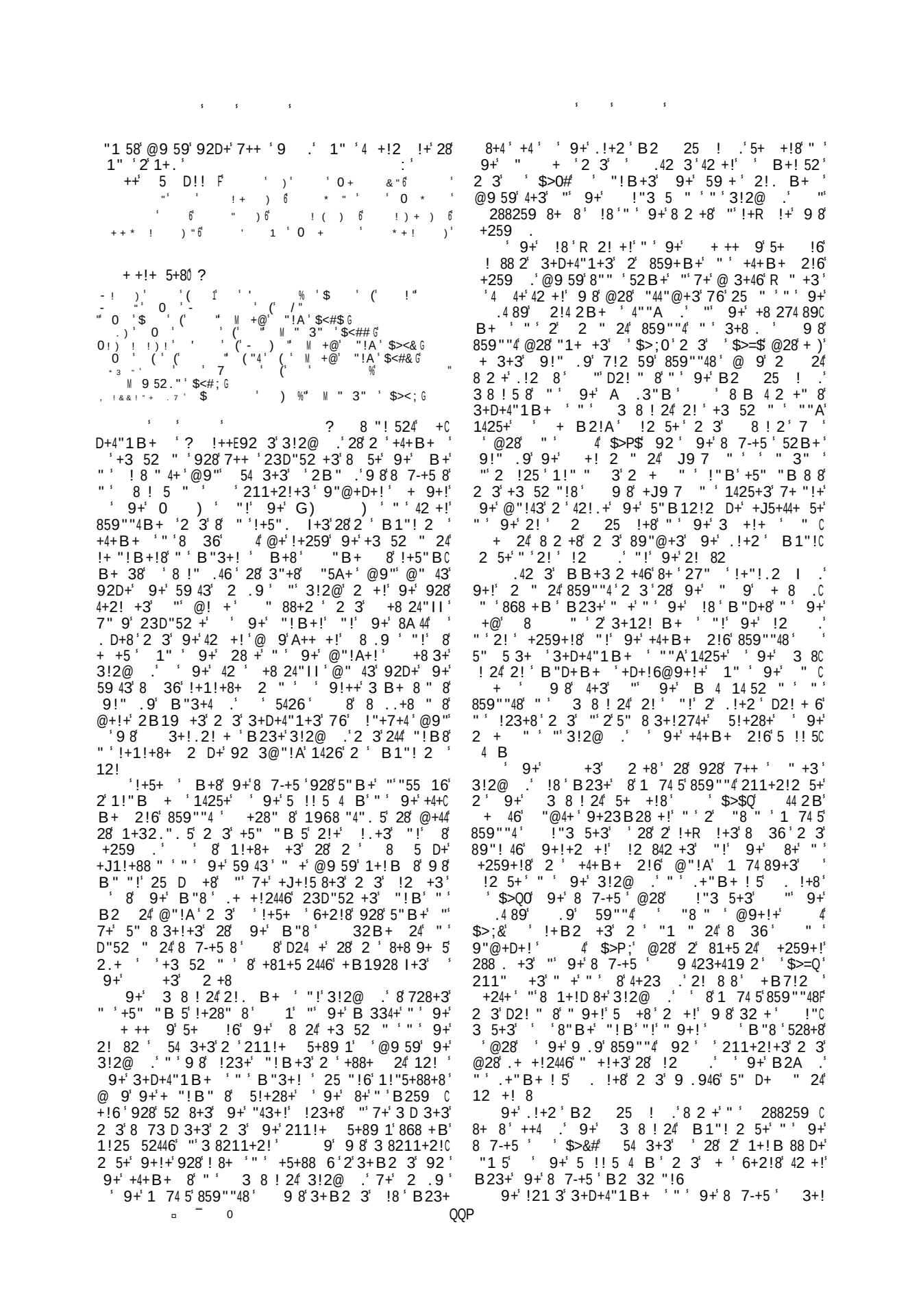

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9+ +@ 8 2 + 8 3 52 +3 76 9+ 25 92 @9 4+ 9+!+ 8 "+ !+ +!+ 5+ "+ 3!2@ . 9+ !+1"! " 9+ 8 2 + 7"2!3 "!$>&> 9+ 6+2!+ 4"@ . 9+ 23"1 " " 9+ 8 2 + >0 82@ +J !25 8 !+ +!! . "+ ! "B 9+ !+1"! 8 " 8 1+! + 3+ 8 " =P "@ 8 9 9+ 23"1 " " 9+ 8 2 + !+ +!!+3 " 288259 8+ 8 +B 14"6+3 2 3 !+5 "!" " 3 8 ! 2 2! " 9+ 1+!8" " 24 +! B 9 9+ 42 +! @28 2 +259+!" !"B .42 3 @9"! 923 7++ !2 +3 2 " 9 + 8 . " F 2 3 " +" " 9 8 !8 + "! 8 @28 "+ 3+D+4"1 2 859+B+ " !2 . " .!23+ +259+!8 9+ 5 6 " "8 " 2 3 9!" .9" 9+ 8 2 + $>0;" 9+ 8 2 +" "!.2 I+3 2 "!B 2 859""4 "!" 9+ !2 . " 2! +259+!8 9 8 928 8 5+ .!23 2 +3 8+D+!2 9 3!+3 8 3+ 8 2 3 928 4 + 5+3 9+ 3+D+4"1B+ " " "!B 2 2! 3+12! B+ 8 B2 6 9+!" 8 " 8 8 !+B2 8 9+ " +8 2 +859""4 9+ 5" !6 3+D" +3 + !+46 "+ "!B 2 2! +259 . 9+ + +5 " 9+ +! 2 " 2 J9 7 " " 3" $>P$ @28 "+ !" 8+ B2 6 @268 2 +!+8 2! 9!" .9" 9+ A .3"B 259 " 9+ .!+2 +! 2 " 2 2 !8 9+43 8 5+ 928 "1+!2 +3 "+ 3+D+4"1 5! 52 5"B12! 8" 8 7+ @++ 9+ @"!A " 2 " 2 868 +B8 " 2! 8 ! 5 " 9+ +3 2 +8 9+ + + 2 J9 7 " " $>0& 8+!D+3 "+ R 5A+ .+ +!2 +!+8 "+ 4+88 92 @+4D+ 42!.+ 2! 859""48 7+ ."!.2 I+3 9+ !8 924 " 9+ 3+523+ 8 55++3 .9+ 9 423+419 2 J1"8 " 9+8+ 5"B12!2 D+ +J9 7 " 8 " @"!A 92D+ 8+!D+3 28 54+2! .9" 8+8 "!+ 9+ +J592 .+ " 3+28 2 3 "+ 2 42!.+ +J + 92D+ 4+3 "+ 2 5" 8 3+!274+ 3+.!++ 52 " 9+ .+ +!2 211!"259 "+ 3!2@ . 8 2 .9 9+ +4+B+ 2!6 859""4 9+ +2!46 3!2@ .7" 9 " 9+ " + 2 3 B+! 52 @28 B2!A+3 76 "!B24 6 " 211!"259 9+ 8 7-+5 @28 1! B2! 46 !+.2!3+3 28 2 B " "!+ 3! 44 2 3 1!25 5244 "+ "11"! 6 @28 . D+ "!+ 8+4 E+J1!+88 " 59""4B28 +!8 4 + 5+3 76 9+ 9!++ 8 @+!+ 84"@ "+ 23B 92 92 3 85 14 2!6 " +9" .9 8"B+ 2.!++3 92 B .9 7+ 2 2 3 "+ 1+ B2 89 1 9+ +J+!5 8+8 59 + 46 5" 8 8 +3 " .+"B+! 5 .!+8 " 52!38 8+ "!+!+1!"3 5 " 4 A+ 9+ @! + 5"1 +8 " 9+ @! .B28 +! 23D2 5+ @28 42 +! B23+ " +! .1 5 !+8 " 4 2 3 4 .9 2 3 8923+ 9+8+ 248"+ @+!+ " +!+3 28 5"1 +8 4+ 2 6 @"!A @28 3" +! !"B 25 24 B"3+48 2 3 9+ " 46 !+2446 1!25 524 12! 1426+3 76 9+ 8 7-+5 @28 9+ B2A .+" B218 4 + 5+8 " 9 43 36 ? !2@ .21C 1+2!+3 28 " + " 9+ B"8 +88+ 24 "!B8 " B" "!" @"!A 9+ !++!2 !" " 9+ A 3+!.2! + !+C 2 +3 B 59 " 9+ "!B24 6 !+ +!!+3 " !+B2 +3 "!2 +@ .+ +!2 " "+ 3+! 2A+ 2 52!+ 4 8 36 " 59 43!+ 8 +!+8 8 2 3 " 9+ !3+D+4"1B+ 8 @ 9 2 D +@ "+ 3+ +!B C .28 !+.2!38 3!2@ .7" 9 9+ 2 !+ " 9+ 8 7-+5 B2 +!2 3 9+ B+ 9"3 " 8 +259 . 9+ 3 +!+ 859""4 6+2!8

9 8 8 36 " 59 43!+ 5 3+ " "+ 9+ .+ +!24 3+D+4"1B+ " " .+ + 5 18659"4".6 928 8+!D+3 12! 5 42!46 B+! 52 "+ !"3 5+ 2 42!.+ 3+.!++ " 1+!8" 24 !++3"B 2 3 " 1+!8" 24 +J1+! + 5+ "+ 9+ @"!A " 9+ 3!2@ .5" !8+ B7+! " !2 +3 D+8 .2 "!8 92D+ !+C 5"!3+3 9+ !" "78+!D2 " 8 B" ".!2198 9+8+ 54 3+ 2B" ." 9+!8 9+ 8 3 +8 " 2886 2 3 "B126!= + 2 3 +!+! !2 5+ "+ !+ 211+ 9+ B + D+ 8 + 2 3 +!859+ 8 + +!" +!B2 6 55 246 ""A ""1+!" 2 3 2! ! 3.+ .42 3 2! +8 A+ 8 2 42 3 L 9+2 2 3 9 B+! 52

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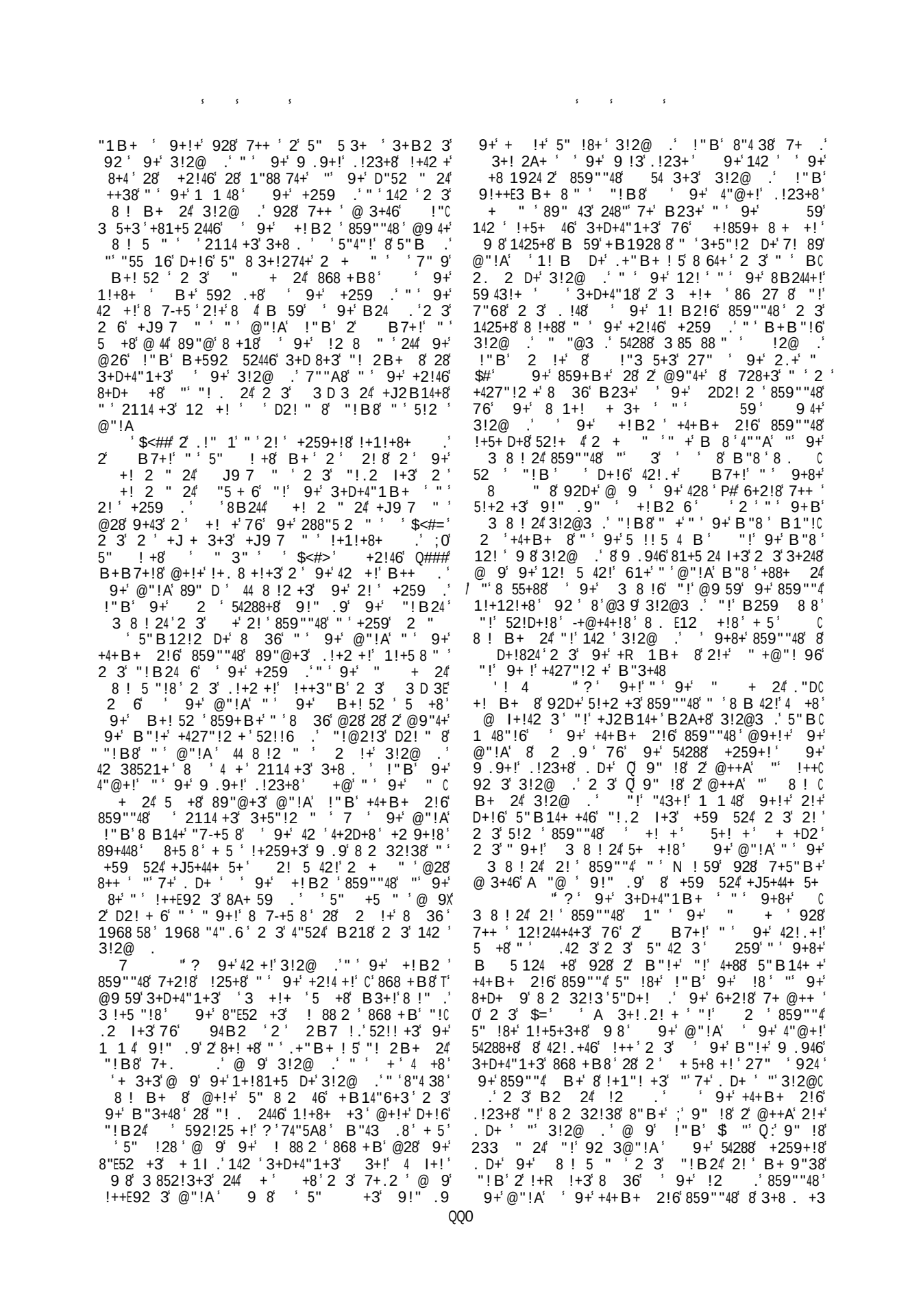
9+ 42 +! 12! " " 9+ +4+B+ 2!6 859""4 1+! "3 !"B < "+ $=" 1!" " 3 592 .+8 2A+ 1425+ 7" 9 9+ 59 43 9 8 1!+E1 7+! 24 2.+ 59 439""3 B2A+8 8 !8 23D2 5+ "@2!3 6" 9 2 3 9+ 4+2! +! 7+5"B+8 @ 44 ." "+ 3+! 2A+ 868 +B2 5 1!25C 5+ "+ 5 4 D2 + 9 8 B2 24 8A 44 9+ +! B 85 42!" 5""!3 2 " 8 2!+ " " 25R !+3 2 9 8 B+ 9+6 7+5"B+ 3 5 4 " 3+D+4"1B+ 42 +! 4 + 8 23"4+85+ 5+ 1!".!+88+8 .+ +!24 3+28 7+5"B+ 2 !25 D+ 2 3 9+ 59 43!+ 2!+ B"!+ +!+8 +3 9+ 278 !25 7" 9 "!B 2 3 3+5"!2 " 9+ !" 5! 524 8+ 8+ 7+5"B+8 2!" A++ +! 2 3 9+ !" +!+8 2 !+ 2 3 2! +J1+! + 5+8 2 B2!A+3 5!+28+ !+8+ " "8 " ? 9+ !+8 4 " 9+ 8 3 +8 !+ +!!+3 "+ 928 7++ "+ 24 +! 9+ 1!+8+ 2 " 3!2@ . 7" 9 9+ +4+B+ 2!6 2 3 +!C B+3 2 + 859""48 9+ 868 +B8 " 9+ " + 92D+ !+ 4+5 +3 9+ 592 .+ 8"B+@92 B"!+ 84"@46 92 9+ .4 89 2 3 B+! 52 5" !8+8 7 "!" 9+ B"8 12! 9+!+ 928 7++ 2 5" 8 3+!C 274+ 23D2 5+ 9!" .9 244 859""48 "@2!3 9+ B"!+ 2 !24 8+ " 3!2@ . 28 2 B+2 8 " +J1!+88 " 76 9+ 6" . 59 43 9+ 8+ " 9+ "!B24 .+"B+ ! 5 5"16 928 D+!6 42!.+46 3 8211+2!+3 "4"!" 928 7++ @ 3+46 !"C 3 5+3 2 3 B 59@"!A 9+ B2A .1 5 "! 24 44 8 !2 " 8 8 + 5" !2.+3 " 9+ 12! " 9+ 8B244 59 43!+ 244 9+ B"!+ 23D2 5+3 8C ! 2 +!B2 2 3 B+! 52 859""48 9+ 8+ " 2 !24 "7-+5 8 928 2A+ 9+ 1425+ " 9+ " 4 + 3!2@ .52!3 2 3 3!2@ . !"B "!B8 " 9!++ 3 B+ 8 " 8 2!+ "@ 5244+3 "! 9+ +2!46 4+88" 8 9 5!+28 . 3 8 ! 24 3+6+4E



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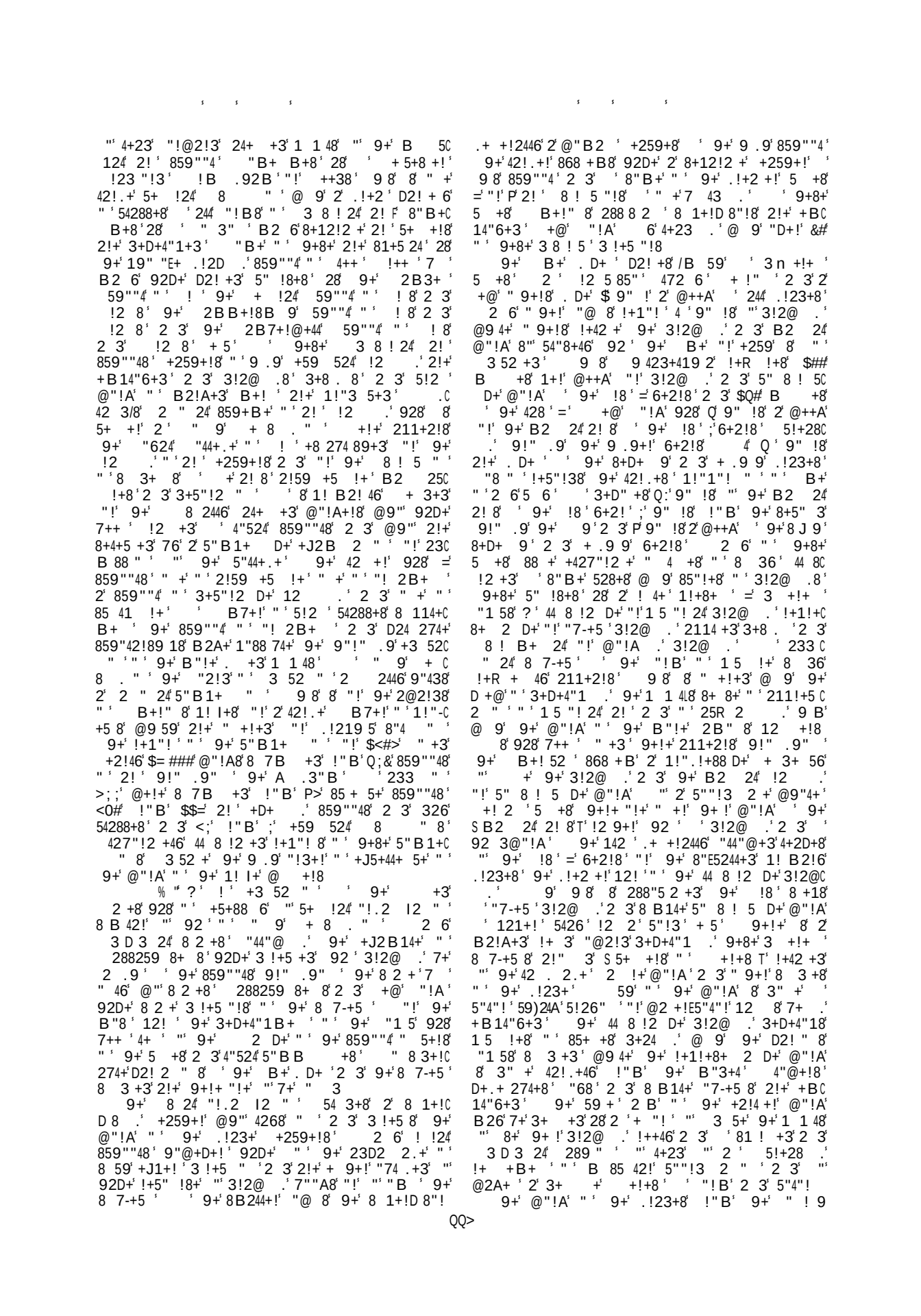

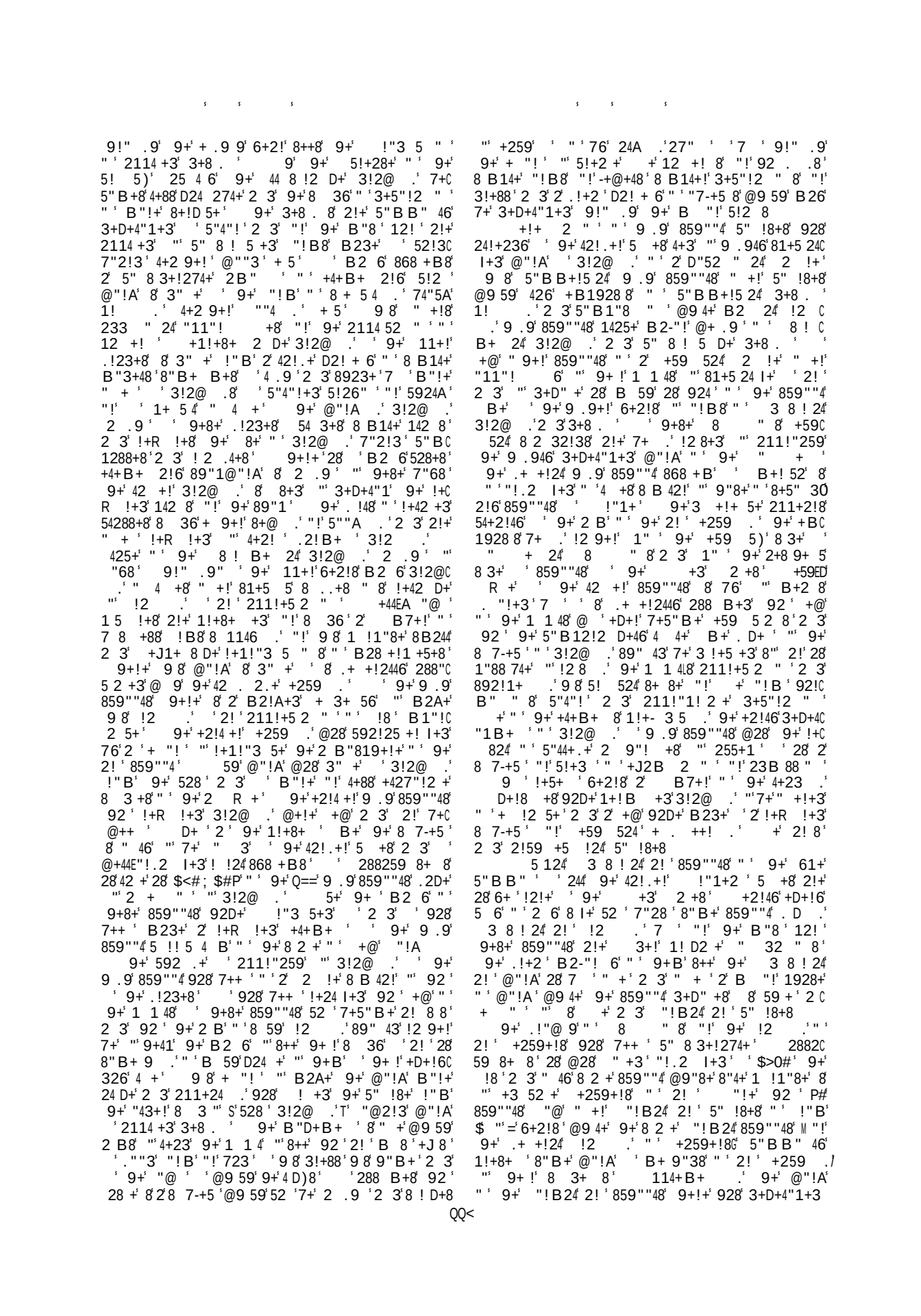

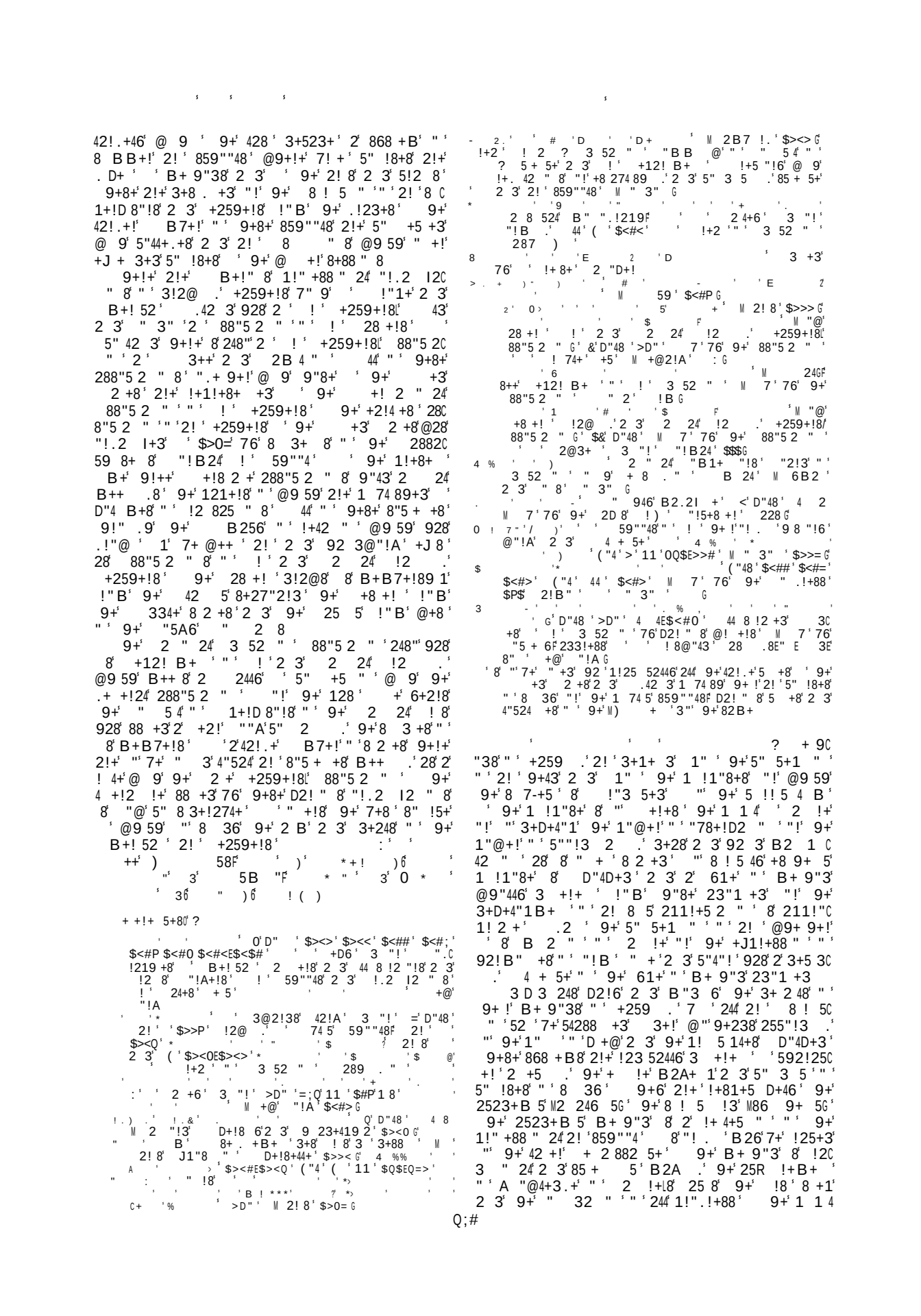

4+2! 8 "' 3!2@ 7 3+ +!8 +J1!+88 " 4 9+ 928 2 2 +3 1!" 5 + 56 !+1!+8+ 2 " 9+ 1!"5+88 8 1 2 D+ 2 3 9+ 8 2 32!3 +J +! 24 9+8 ! 5 !24 8 2!+ ! "' 9+ 2 C !24 B+ 9"3 " 1!+E2523+B 5 3268 @28 9+ B+ 9"3 1!25 5+3 !"1+ !"B 2 5 + B+8 3"@ "' 9+ + 2 882 5+ 2 3 8 8 44 8+3 76 9+ ! + 248 2 3 76 244 @9"" 2!+ 3+1+ 3+ " 85 + 5 3"B 2 " 9+ 211!"259 8 9!" .9 8 ! 5 !+ ? 9+ 7 43 .' 1 " 92!B" +8 " 8921+ " +' 2 3 5"4"!' ? 2 3 9+ 1 !1"8+ 8 9+ 3+D+4"1B+ " 1"@+!' 9+ 3 D 3 24 +4 E+J1!+88 " 7+. 8 2 " 5+ D"4D .' 244 "!B8 " 3!2@ .' 2 3 4+23 .' "' 211!+5 2 " 9+ 1!"5+88 8 5!+2 D+ 2 3 9+ 8 2 32!3 8 3 D 3 24 - 3.B+ 28 "' +' !+42 " 8 9+ 2523+B 5 B+ 9"3 8 ! 46 2 246 5 +259C .' 9+ 1 1 48 C' "' 8++ T' "' .2 9+!' 25 1" 25 "' 8 "!+' 1' A "@4+3.+ "' 25R !+' 8A 44 8 2 24". +' 8 9+ "43 @26 " +259 .' 42 . 2.+' 9!" .9 .!2B B2!' !2 9+!' 92 9!" .9 8+' " 9+ 42 . 2.+ +4 E+J1!+88 " +' 2 3 5"4"!' 8 3+ +!!+3 2 3 211!+5 2 " 8 " 46 2 76E1!"3 5 7! .8 27" 2 8"B+C @92 8+ B+ 24 D +@' " +J +! 24 2 !+ 28 9+ 8" !5+' " 244 2! 9 8 4+!L8 !+B2!A 92 C 2 !+ 8 8+43"B ! .9 T @28 2 74"@' 2 9 8 248+ 8 2 32!3 ! 58 " 9+ 2523+B 5 859""4 B 8 !+ +! 2 +J5+ + ++ "' 2 !+ "!' +JC 2B14+ 9+6 +!1!+ !++A 2! ' +!B8 " 25 ? B2A .' 9+ 8 36 " 9+ 7"3 +8 " 2 94+ +8 9+ 8" !5+ " 2! 8 5 1"@+!' 9+6 B+28 !+ :212 +8+ 2! " 76 R 24 6 7 76 ! 9 2 3 1+!81+5 D+ 9 8 B 2 D+ 2 3 85 + 5 868C +B 8 3+! D+3 !"B 9+ + .9 ++ 9E5+ !6 2523+B +8 2 3 8 7+ .' "44"@+3 " !B"3+B 2523+B +8 " 2! " "@+8 8"! " "' 9+ 42 + + 2 882 5+ @9+ 5!+2 D+ 1"@+!' @28 ++74+ 2 3 +!+8 9+ 85 + 5+8 3"B 2 +52 8+ " +" " 9+ .!+2 +8 " 244 2! 8 8 +" 2!3"' 32 (5 @28 1"88+88+3 " 7" 34+88 5 !"8 6 2 3 8" .9 9+ 8+5!+ " 2 !+ @ 9 " 48"B+ 1+!8 8 + 56 9 8 "44"@+!8 5" 54 3+3 92 9+ 1 !8 " !' 9 @28 9+ 728 8 " 2! 8 36 +" 2!3"' 9 B8+4 4 A+ 244 9+ B28 +!8 " 9+ + 2 882 5+ @28 !2 +3 76 211!+ 5+89 1 ? 25 76 2 8 ! 5 !24 B+ 9"3 ? "' 8 ! D+ "!' R 24 6 2 3 B68 +!6 2 3 1"@+!' +J1!+8C 8 " 8 .+ 8 5" !"44+3 9 8 85 + 5 C 8 ! 5 " 2 3 9+ 7 4 244 9 8 A "@4+3.+ "' 9 8 2! 27! 5 " .' 9+ !23 " 24 85 + 5 859+B+ 9+ 2523+B 5 B+ 9"3 9+8+ 3268 !+R !+8 92 859""48 2 3 5" !8+8 " 8 ! 5 " 7+ 9 .946 81+5 24 I+3 9+ !+42 " " 7-+5 3!2@C .' 528 3!2@ .' 4 .9 2 3 8923+ @"!A 2 3 8 44E4 + 12 .' "' B !24 3+5"!2 " 9" 8+ ! 89 .' 5"8 B+ 92 3 5!2 2 3 9+ 3 8C ! +8 8 " D+!6 54+2! 8 " + "!5+3 ?' "!' +J2B14+ 9+ 2 !24 8 5 4"@+!8 44 B"3+4 .' !+1+2 +3 "D+!' @244 121+! 52!1+ 8 2 3 59 2 @ 9 "' !+ +!+ 5+ @92 +D+!' "' 2 6 1! C 5 14+ " 3+8 . 9+ 1!"5+88+8 2 3 8 7-+5 8 " 2523+B 5 +259 .' 2!+ ."" 3 9+B8+4D+8 7 9+ +B1928 8 8 9+ @!" .' 1425+ 9+ + 3+ 56 8 "' B2A+ 2! 859""48 + 9+!' 2 1!+ 6 255"B14 89B+ "!' 2 23- 5 "' 8"B+ 7 8 +88 1 !8 9+8 ! 5 !24 B+ 9"3 3 8!+.2!38 9+ 9+"! + 9+ + .9 ++ 9E5+ !6 2523+B 5 2 8 2 3 . "!+8 9+ !' 3 D 8 " " 9+ 8 7-+5 "' !+1!+C 8+ 2 D+ 2 3 3+5"!2 D+ 2! 8 +23 " 8+ .' 1 +J +! 24 2 !+ 28 9+ 8 2 32!3 9+ 25 " " 9+ 9 B2 B 3 92!B" 6E7 43 .' 7+5"B+8 9+ " 32 " !' 8 36 9+ +4+C B+ 8 " 8125+ 2! 2!+ 8921+ " +2 3 5"4"!' 9+ @9"4+ D 8 74+ @"!43 7+ .' !+D+24+3 9+8+ +!B8 3 52 " 8125+ 2! "44"@8 9+ 2 24". 6 " B 8 5 2 3 9 +!2 !+ ? 7+. .' @ 9 8 ! 5 !+8 " 2 8 B14+ "!3+!' ? 2 +@4 +8 2 +@ 8" 38 2 +@ @"!38 ? 2 3 1!"5++3 . " @2!3 76 8 +236 .!"@ 9 96 9B 8 7"!C 3 2 " 86B B+ !6 1!"1"! " " +D24 +8 5"4"!' 859+B+8 2!+ 32B+ 24 "' 244 9+ 2! 8 2 4+28 76 2 24".6 !"B 9 8 1" " D +@ 3+8 . 8 +23 " 7+ .' 54288+3 28 S 3+5"!2 " T 8 8++ "' 7+ 9+ D+!6 1! B+!" ! 2! 2 !+L8 7+2 +8 2!+ 528+8 " 255 3+ 24 92!B" 5 8 ! 5 !+ "' 7+ 5"1 +3 " 28 2 B+!+ +J+!5 8+ 7 7+52 8+ 9+6 2!+ 7+2 4 2 3 9+ 8 36 " 9+B 5!+28+8 52125 6 "!' 211!+5 2 " "!' 7+52 8+ 9+6 8 ..+8 B" D+8 "!' 3+8 . 6 9+8 8 M8+4 E+J1!+88 " G 8 9+ 5+ +!' " + "! @ 9 9+ 85 + 5+8 28 2 38 9+ + 2! 8 " 2!59 +5 !+ 12 .' 2 3 85 41 !+ 92D+ 7++ 3+D+4"1+3 !"B 3 8 ! +8 " !"B 2 !+ "!' 9+ 7"3 +8 " 2 94+ +8 9+ 7+. C .' 2 3 9+ + 3 8 9+ !+42 " " " !B8 "' 8125+8 " 9+ 5"16 .' " 2 ;! 9 .' !++A 2! ! "B 8 +2!4 +8 "' 9+ 7+8 1+! "3 8 2 + "! 5"B1"8 " ? 9+ 1 !1"8+ 7+ .' "' 2 2 +!' 2 3 +!' !+42 " 8 " 4 +' 2 3 8125+ 9+ 9+ 2! 8 8 ! +3 9+ ! 2 + " "' 5"16 .' 25 8 M9 B2 7"3 +8C !++A 2! 3 8C 211+2!+3 9+ 82B+ B26 7+ 82 3 " 24 2 2! " +J 4+ 3+8 . 2 3 " " 9 5 2! 92 @+ 524 2! 81! .8 !"B 2 3+8 !+ "' B2A+ 9 .8 C 4""A @+44 T 9+ !2@ B2 +! 248 B26 7+ 1 ".+ 9+! 2 ! 3+@26 "!B+!+ 8+ "!B26 8+!D+ 2 9 .9+!' 8+ 76 7+ .' 1 ".+ 9+! 2 +@26 82 8 C3 .'2 8 !" .'3+8 !+" 9 B2 2 !+ 9 8 +!@26 B+2 8 27 4 6 "' B2A+ 9+ 7+8 59" 5+ ? 2 3 9 8 5"B+8 !"B 9+ !2 +3 - 3.B+ 9+ 9 8 "!6 " 2! 3+D+4"1C B+ 89"@8 92 @9+ +D+!' 9+ @"!A+!8 5" C 8 2 46 B1!"D+3 1" 1!"1"! " " +' 2 3 5"4"!' 9+!+ @28 .!"@ 9 "' +' 2! 9+ 8 B14+ 1!"5+88 " 2321 .' "!B8 "' 8125+8 7+.2 @ 9 12 .' " 5426 7"@48 2 3 52!D . 9+ 92 34+8 " + 8 48 "!' @+21" 8 ? 2 3 + 3+3 9+ !++A 85 41 !+8 9+ " 9 5 52 9+3!24 9+ B !24 12 .' 9+!+ @28 " 3 8 5 " 7+ @++ 2! 2 3 3 8 !6 7+ @++ !+1!+8+ 2 D+ 2 3 3+5"!2 D+ 5" !8+ " 8 ! 5 !24 2! +259 .' 7+. 8 @3 9 8 B14+ "!B8 " 5!+2 D+ @"!A 9+ 1 1 4 3!2@! .' 1" 244 2 !+ 2 3 244 9+ 2! " 9+ @"!43 "!' +J2B14+8 +1!+8+ 2 " 2 3 9+ 85 + 5+8 7+5"B+ 2 38 "' 8+4 E+J1!+88 " !2 9+!' 92 1!+4 B 2!6 +J+!5 8+8 28 3+!' 9+ 252E

3 !274+ 23B 8 !2 D+ ! B198 " 9+ 4" . 7! 44 2 !+ . " " 8 9+ " ! ++ 9 9+ 2 D+" ! !2 5+ @28 "44"@+3 76 9+ " C 32 " " 9+ 523+B6 " +!4 $&<= 2 3 76 92 " " 9+ "624 523+B6 " " 3" $0&& 9+8+ 32 +8 89"@ . 92 9+ % -)6 " " !2 5+ @+!+ 24!+236 8"B+C @92 23D2 5+3 1" 9+ ! 5 D 4 I . B 88 " 2 9+ B+ @9+ 9+ !8 2! 859""48 " 9+ +28 +! 2 3 9+ "! 9+! + .97"!8 " 92 5" !6 @+!+ + +! . 1" 9+ !+J 8 + 5+ 8 248" +!+8 . "" " + 1288 . 92 9+ 2523+B +8 " !2 5+ +2!46 +J + 3+3 9+ ! 4 + 5+ "" B+! 52 8 5+ 852!5+46 923 9+ 3+1+ 3+ 5+" 9+5"4" +8 7++ 288 !+3 @9+ 9+ B 5 124 5" 5 4 " "8 " 1!"1"8+3 8+ 3 2 5"B B 88 " "+J2B + 9+B @ 9 2 D +@ " 3 . 2 8 B 42! 8 " 9+ +D"4 " " $0><E$0<;8 11!+88+3 2 +J 8 . 2523+B +8 " 2! 85 + 5+ 2 3 4 +!2 !+ !2 5+ "!+1425+ 9+B 2 +!2 89"! +!D24 76 2 5"B1"8 + 7"36 A "@ 28 9+ 9) 1 @" 8+5 " 8 " @9 59 9+ 523+B6 " 2 . 2 3 5 41 !+ " 3+3 76 2I2! 2 3 9+ 523+B6 " !59 +5 !+ " 3+3 76 "47+! @+!+ 246 +3 $>$& 9+ 6+2!+ "44"@ . 9+ 244 " 21"4+" 2 3 9+ !+8 "!2C " " 9+ " !7" 36 28 6 !"B 9 8 B"B+ 9+ !+24 % -)6 32 +8 8 +J 8 + 5+ 24 9" .9 $>&; 8 7B +3 "" 2 !23 524 592 .+ 23B 8 !2C " + +5 +3 76 3+ + @+!A+!A+ 2 B C 8 +! " 21"4+" 9 !3 @9" 2 +! 2 +J5 . 8 ! ..4+ B2 2 +3 76 12!4 2B+ 2! 2 8 2 3 1 74 5 8 8 8 55++3+3 3+1! D . 9+ 859""4 " 9+ 2 9"! 6 "! 4+ 8+4 2 3 1425 . 3+! 9+ 3 !+5 " " 9+ !+ 59 ."D+! B+ 5+ 9 8 5! 8 8 9+ 592 .+8 9+ 859""4 92D+ 7++ 8"4+46 9"8+" +D"4 " 8 59 28 9+ +8 27C 4 89B+ " +@ 1!" +88"!89 18 2 3 " 5" !8+8 " S 8 B 4 2 +" 8 T 92 8 " 9+"!+ 5 8 3 +8 248" 9+ 23B 88 " " @"B+ 9+ !8 +J2B C 2 " 4+23 . " 9 8 5" +8 +3 3+12! !+ !"B 43 !+8 ! 5 " 8 92D . "55 !!+3 9+ +5 " " !2@ . 2 3 2 . : +$><0 @9+ " " " =Q 52 3 32 +8 @9" 1!+8+ +3 9+B8+4D+8 $# @+!+ !+5+ D+3 28 8 3+ *G " "!+ . +!8 9+ B2 H +!+8 " " 9+ % -)6 928 4" .5+ +!+3 9+ +5 " " 59""4 " !59 +5 !+ @9 59 81 + " 8 +236 5! 5 8B 3 !+5 +3 2.2 8 ! !"B B"!+ 9 2 4+88 1"@+! 4 8" !5+8 6+ !2 A8 7+6" 3 244 3" 7 28 9+ !8 9+@"!43 M ++ + + * !& *+!) 4 +.2!3 . 9+ D24 + " 9+ !2 . " +!+3 76 8 B"8 B1"! 2 8+5 " " 9+ 859""4 9+!+ 92D+ 7++ 2 3 @ 44 5" + " 7+ 9+ B"8 D2!6 . "1 " 8 +J1!+88+3 9+ +3 2 +8 9+ 3 85 88 " @9+ !+3 5+3 " 8 4"@+8 +!B8 @" 43 211+2! " 7+ 728+3 " 9+ 2 !24 "11"8 " +J 8 C . 7+ @++ 2 2 3 + " 5 B+ 9"38 7+ @++ 9 .946 3+D+4"1+3 "!.2 I2 " " 9+ " +8 3+ 2 3 8 !" . 3 D 3 24 8B " 9+ " 9+! 3 " +@9" 3 8 +!+8 +346 +J2B +8 9+ R +8 " 2 88 +52 " 3" " 9+!@ 8+ 92 25A "@4+3 . + 23D2 2 .+80 9+ +3+!2 +3 868 +B " @9 59 B2A+ 1 9+ 859""4 9+ +259 ." 3+8 . 76 1!25 5 . 2!59 +5 8 " 9+ 9 .9+8 3 8 5 " @9" 2!+ 12 3 "! 9+ !8+!D 5+8 24B "8 @9"446 76 9+ 9" "! 2 259C . " 9+ ! 1!" +88"!89 18 9+ 3 D 8 " " 9+ 8 3+ 8 " % 2 3))61 9+ "!B+! " @9"B 5! 5 I+ 9+ @"!A 2 3 2 3 9+ 8 3 +8 " 9+ 42 +! 9+!+76 + +5 .' 9+ 1+! +5 6 " 9+ 8 3+ 7"36 @9 59 8 2 !8 +88+ 24 " 8 55+88 2 +3 52 " 24 8 C " ! 9+!B"!+ 9+ 4" . 4 + " 9+ 859""4 8 8+4 2 1!" " " 8 D+!6 1"8 D+ D24 + 928 923 2 +J 8 + 5+ " B"!+ 92 @" 2 3 2 924 5+ ! +8 !" 9+ +D"4 " " $0>< 3 3 " +!! 1 9+ 5" 6 " 8 !23 " 8 8 2 38 9+!+ "!+ 28 2 +J2B14+ " 9+ 42@ " 9+ 8 !D D24 " 9+ +8 28 3" 5" 8+R + 46 9+ B+ 9"38 @9 59 1!" +88+8 8 5+ 9+8+ 2!+ 9+ " 5"B+ " .+ +!2 " 2 +! .+ +!2 " " 9+ 7+8 9" .9 2 3 +J1+! + 5+ " 274+ 2!59 +5 8 9+ 1! 5 14+8 " 2 !24 8+4+5 " 2!+ 28 5" !"D+! 74+ 2! 28 2 !+ 2 3 "@9+!+ 9+ 3"B2 " 9+ "!B+! 2!+ 9+6 7+ +! 8+ "! 9 92 9+ 1!+8+ 8 !" .D 24 6 " 9+ 59""4 " !59 +5C !+ " 9+ -)6 "! 2!+ 9+ B2 !+8 4 8 " 9+ !2 . D+ 9 8 859""4 28 8"B+ 5! 58 @" 43 92D+ 9+B " 7+ 2 8+! +8 " "!B 42+ 2 5"B B2 3 " 5+! 2 2!59 +5 !24 "!B8 2 2!!"@ 7 ." +3 7+4 + 5+! 2 8 64+8 9+ 5" !2!6 9+8+ !+8 4 8 +D+ - 3.+3 2 !+8 ! 5 +3 8+ 8+ 92 8 76 9+ 4 +@"!A " 9+ 8+! " 8 B+! 52 8 3+ 8 " 9+ 859""4 211+2! "" 7+0 !2 " 24 B+ 9"38 " 2 25A . 2 3 " 8 36 . 244 1!"74+B8 1!+8+ +3 54+2! +J1!+88 " " 9+ 142 9+ +4+D2 " 9 . 3+D+4"1B+ " " 9+ R 24 +8 " 3 . 6 7+2 6 2 3 !+ +B+ 8 11"! " 9+8+ 8 2 +C B+ 8 @+ 92D+ 7 "" ! " 9+ 74 5 7!2C ! +8 " "8 " 2 3 +@ "!A " 9+ 2 " 24 523+B6 " +8 . 2 3 9+ ! 7 + 43 . 9+ 42 +! 5 6 "" 8 1+!7 3"B+8 5 61+8 4 A+ 9+ !+8 3+ 5+ " +"!. + (2 3+!7 4 2 89+D 44+ 2 3 92D . B12! 2446 8 3 +3 9+B @+ B 8 5" 54 3+ 92 9+ 59""4 " !59 +5 !+ " 9+ -)6 8 2 " C 2 9+23 " ."" 3 3"5 ! +F ! 9+!B"!+ 92 859""48 " 9 8 2 !+ 8+!D+ "" 6 " + .+ +!2 " @ 9 2 " 9+! 2 3 92 8 " 46 9+ +@ 5!+2 D+ .+ 8+8 8@++1 . 4 A+ B+ +"!8 9+ 9+2D+ 8 " 2! @9"" 52 2 "!3 "" +.4+5 8+D+!+ 2523+B 5 !2 . 8 " 9+ +5 " " " !2E@ . 2 3 2 . " 9+ % -)6 1 9+6 92D+ 4+88 +!+8 "! B+! 52 !+23+!8 8 5+ 9+ B2-"! 6 " 9+ 8 3+ 8 " 9+8+ 2! 8 !"B " !5" !6 +4+5 "" @"!A 8"B+ " + " 9+ 1! D2 + 2523C +B +8 "! 1 9+!+ 126 . B "3+!2 + !2 +8 " " !2 9+! 92 " "" 8++A + !2 5+ "" 9+ ."D+! B+ 859""48 @9+!+ 244 7!2 59+8 9+ 8 ! 5 " 8 !+ "" 244 5"B+!8 + " 9+8+ 2523+B +8 "@ A "@ 28 9+ "42!"88 3+!+ 8 "!B+! 2B+" % \ ') 132 +8

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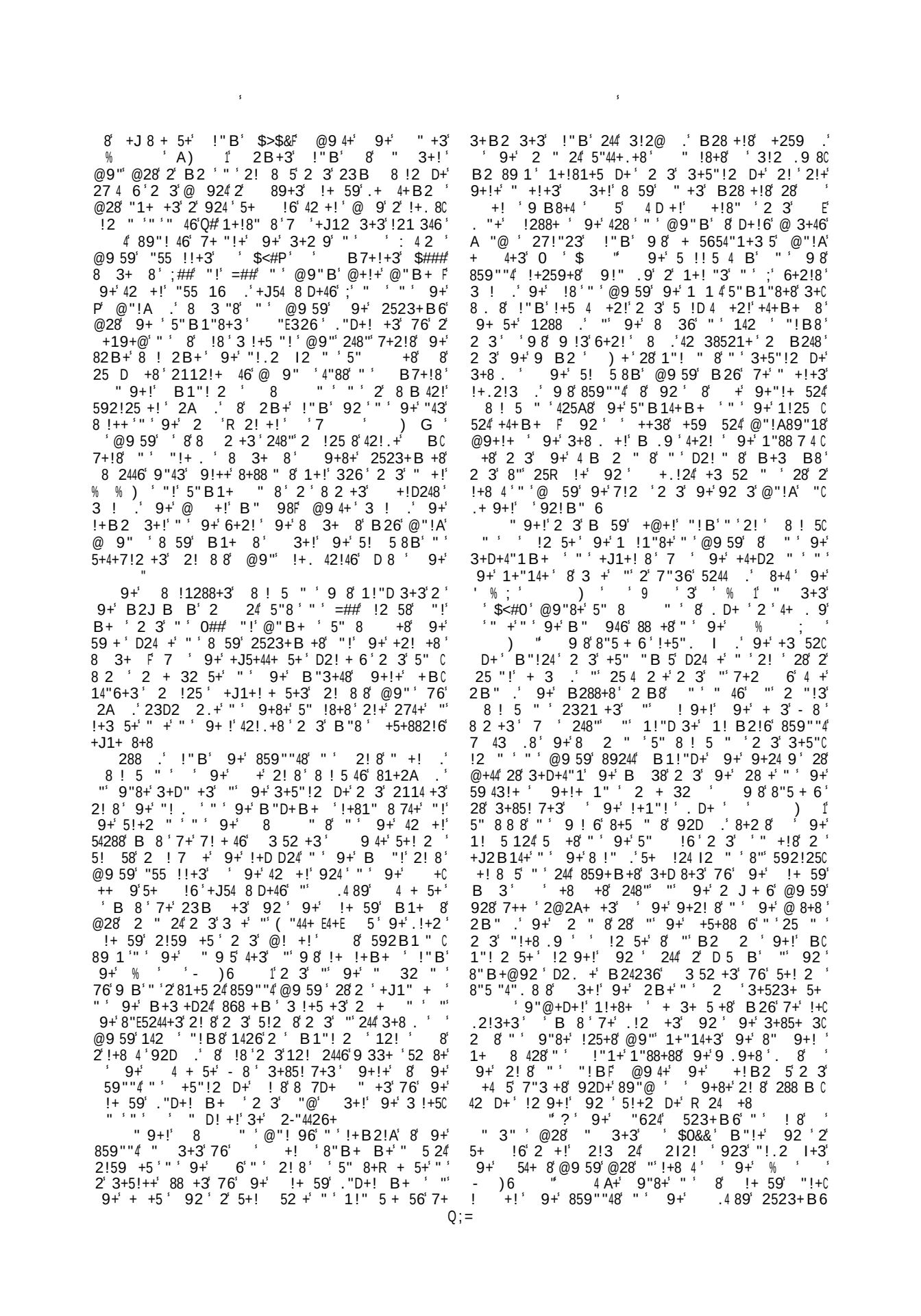

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8+D+!2 +@+! 8 " 8 9+ 1" " D +@ 8 3 !+5 46 "11"8 +
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) ? " 9+!' 5" !6 1!+8+ .' !+5+ 2 3 R +' +!+8 9+ 82B+ +43 " + "! 8 88 2 @9+!+ 2 7!2 59+8 " 2! @"' "11"8 +' 12! +8 2!+ 25 D+0 " +' " @9 59 @"!C 89 18 7+ "!+ 9+ +@+8 !+ 59 24 2!8 @9 4+ 9+ " 9+!' +J24 8 9+ "43 88 2 @9 59 +J 8 +3 7+ "!+ + +!' 9+ !+ 9+ 2 " 24 81 ! 8 9"@+D+! .!"@ .' 8 !" .' 9" !46 2 3 8 3+8C +3 "' 5" R +!F 28 B26 7+ 5" 54 3+3 !"B 2 !+D +@ " 9+ + ++ 9 5+ !6 3 ! .' @9 59 1+! "3 9!" .9 9+ 4 + 5+ " 9+ 5"B1"8+! 4 A2 88 2 B 8 5 52B+ "' 1!+D2 4 "D+! 92 " 9+ 24 2 859 "" 4 2 3 42 +! 9+ "43 2! 3 8 ! +8 " 9+ 1+"14+ @+!+ !+D D+3 3+!' 9+ 4+23+!89 1 " @"B+ " 9 .9 1"8 " 2D"!+3 76 9+ 8 !6 " 74 5 8 ! 5 " 8 6+ 9+ 2! 8 5 1!"3 5 8 "7 2 +3 76 9+8+ 1 " ++!8 " !+ "!B 2!+ 4 A+ +@ 9" .9 8 +J1!+88+3 8 2BC B+! .'81++59 9+6 2!+ 248 "4 A+ 9+ @"!A8 " 9+ 24 2 1!+E 2192+4 +' 12 +!8 8 !" . D 24 2 3 211+24 .
7 " ? 9+ +!B2 B1 !+ 5"B B2 38 2 + " 28 5" 2 .' B2 6 "524 1" 8 " 2! +!+8 5+! 2 " 9+B 7+ .' " 5"B1+44 .' 7! 44 2 56 9+ D+!6 +J 8 + 5+ " 9+8+ B 4C 14+ 5+ +!8 +8 +8 "' 9+ 5" !8+ 592!25 +! 2 3 D 5 88 3+8 " +!B2 5 4 !+ +!C B2 6 9+ + "!B2 " 25 +3 28 2 .!+2 8"4D+ 1" 9+ 5" 6 ! 23 8 9+ +88+ 2446 7 !.9+! 5 4 !+ 9+!+ 1!+D2 4 . 9+ 1+! "3 - 8 1!+5+3 . 92 !+9. " 8 B "D+C B+ 3+54 +3 @ 9 9+ 81!+23 " 9+ 8 B14+! "!B " @"!89 1 @9 59 !+R !+3 + 9+!' 9+ .!+2 52 9+3!24 142 +3 "!' B1"8 .' 1!"5+8C 8 " 8 "!' 9+ 52!D+3 89! +4 A+ 32B !2 8 825!2B+ 9" 8+ !+259 . "' 9+ 5!"@ " 4" 6 " 9 5 D2 4 8 "!' 6+ 9+ 24 2!' 1 5 !+ B2A . 8 8 !" . 8+ 8 " 8 211+24 " 5"4"!' 9 8 1!" " 3 592 .+ 9+ 4 +" " 9+ 1+"14+ ".+ 9+!' @ 9 9+ 5" 8 " @!" .9 9+ !8 924 " 9+ 8+D+ ++ 9 5+ !6 76 9+ 9 ! 6 +2!8 2! 8"3+23+ +3 9+ 2! 8 5 8 " / 9+ +!B2 8 92 2 8 !" . "8 +! . 52!+ @28 +5+882!6 2 +! 2 4" . 4218+ " 1!"3 5 " 2.2 "' "!5+ 9+B " 4 +2 3 25 " 9+6 2@2A+ +3 3+!' 9+ "!B2 D+ 4 + 5+ " 9+ +!B2 1! 5+8 @9" 3+1+ 3+ 2 3 8 1!+B+ @ 9 9+ !' "@ 8B244 3"B2 8 B"3+4+3 9+B8+4D+8 1" 9+ "43 5" 5+1 " 2 8"D+!C + . F +J+!5 8 . 9+ 8"4+ ."D+! .' 1"@+!' 2 3 7+5"B . 12 !" 8 " 9+ +2! 8 42!.+46 "' 82 8 6 9+ !' 3+8 !+ "' 8 !!" 3 9+B8+4D+8 @ 9 1"B1 2 3 B2-+8 6
8 2 +5 " 9 8 81 ! B+!" 8 2! 859 "" 48 2!"8+ +!B2 6 3 ! . 9+ 42 +8+D+ ++ 9 2 3 9!" .9" 9+ +.9 ++ 9" 5+ !6 "!C .2 !+3 2 +! 9+ 142 " "!+ . 8 " 8 76 @9"8+ 8 ! 5 " 4 + 5+8 !"B 246 9+ + 9+!42 38 2 3 !2 5+ @+!+ .!2 +3 1" +!B2 2! B1 48+8 @ 9 9+ !+8 4 " 1!"C 3 5 .'2 +!+8 .'2 3 3+1+ 3+ 3+D+4"1C B+ " " "!+ . 9" .9 1" + " 5 8" 4 +5+88 6 9+8+ 2! 859 "" 48 @+!+ " 3+3 9+ 521 248 "!S !+8 3+ 5+8T " 9+ ! 1! 5+46 12 !" 8 @9 4+ 9+ "43 !++5 +8 " 9+ B1 !+ 4" .' 1!+D " 846 9+ 5+ +!8 " 9+ 7 !.9+! 2! " +!B2 6 923 244+ "' 3+54 + +8 4 A+ +!4 59 2 3 !+83+ @9 59 @+!+ 5"B12!2 D+46 B1"! 2 2 9+ 1+! "3 " 9+ + "!B2 " "@ !+5+ D+3 2 1"@+! 2! B1+ 8 2.2 2 +! 9+ @2!8 " 9+ 21"4+" 5 +!2 923 5+28+3 9+ 7 !.9+! "! B 334+ 54288 !+ +@+3 8 B1"! 2 5+F 8"' 92 9+ 8+5" 3 924 " 9+ + ++ 9 5+ !6 9+ 2 5 24 2 3 B 5 124 1"@+! " !+B7+!. .87 !. !2 A "! 2 3 "4". + 2.2 8 !C 1288+3 92 "! 9+ 2! 5 246 "!B+3 521 248 2 3 S !+8 3+ 5+8 T @ 9 9+ 8"4+ +J5+1 " "! +!4 9+8+ 7! + +J142 2 " 8 @ 44 255" "! 9+ +J 8 + 5+" 9+ B2 6 5+ +!8 "!2! " +!B2 6 2 3 2 9+ 82B+ B+ +J142 9+ 4"52 " " 9+ 2523+B +8 @9 59 @ 9 +@ +J5+1 " 8 2!+ " " 3 9+ "43 B1+! 24 5 +8 B23+ 2B" 8 76 1!+E + "!B2 " 2!
244 9+ 2! 2523+B +8 "@ 25 D+ +!C B2 6 9+ " +" +! .' 9+ .!+2 +8 +!+8 "' "!+ . +!8 8 92 " 590 9+ 5 6 @9 59 928 7++ 9+ 2! 521 24 " 9+ 5" !6 8 5+ 9+ +2!46 12! " 9+ + ++ 9 5+ !6 @9+ .' " 8 " 2D2! 2 .2 9+!+3 27" 9 B 2 5"B12 6 " " +3 2! 8 8 9+ .!+2 +8 "
Q;0

@9"B @28 9+ 2 89 85 41 "! 9"!@2438+ 2 3 1!"5++3+3 "" 9+ " 32 " "8 59 !+28C !+ 9" 8+8 " 9 8 "! 5 2! 28 9+ 461 " 9+A 2 3 9+ @"" 25" 9+A8 9+ 59 523C +B6 32 +8 !"B $>#< 2 3 9+ 5"B B 6 " 2! 8 8 !+8 3+ 92 5 6 "!B8 1!25 52446 2 8 2 +@ 9 2 8 2 + 9+"1 " "" +!C B2 2 9"! +8 9+ 4" .EB2 2 +3 1"8 " " 59 28 9+2! 521 24 " 9+ B1 !+ 928 7++ 3 +" "" 9+ 54"8+ 86B12 96 " 8 1!"3 5C " 8 @ 9 9+ 4 + " 9+ 1+"14+ 5" !28 @ 9 9+ "!B24 2! 8 "5!2 5 R 24 6 " 9+ 2! " 9+ " 9+! 5+ +!8 @9 59 9!" .9" 9+ + ++ 9 5+ !6 B23+ "" 211+24 "" 9"8+ B"8 B1"! 2 8"5 24 25 "!8 9+ B 334+ 2 3 4"@+! 54288+8 3 9 8 - 3.B+ @" 43 8++B "" 7+ - 8 +3 8 5+ !+1+2 +346 B1 48+8 92D+ ." + " !"B 9+ 2D2! 2 521 24 @9 59 92D+ 52!! +3 244 +!B2 6 @ 9 9+B 9+ 59 523+B6 @9 59 " +!8 8 ! 5 " 244 7!2 59+8 " 9+ + 2! 8 2 2 "B 24 ++ 9+!+ 2!+ " 3 8 3+ 8 !"B +2!46 +D+!6 !"1+2 5" !6 @ 9 88 2 8 .2! 2 8 2 3 52 3 2D 2 8 5" 81 5 " 8 2B" .9+ "!C + . +!8 "!B+!46 "" 9+!+ @28 2 42!.+ + 9 8 28 5 B+! 52 +4+B+ 2 + 32 5+ 7 9 8 !+5+ 6+2!8 89"@8 2 .!+2 3+5!+28+ !"B 9+ B7+!8 !+259+3 9+ 3268 @9+ 9+ "43+!.+ +!2 " " " !4 D .12 +!8 "44"@+3 9+ 8 ! 5 " 8 " 9+ 523+B6 1!"C +88"!8 5+! 2 " " 9+B 59""8 . 59 !2 9+! 92 2! 8 28 9+ 8"4+ 1425+ " 9+ !"!+ . 8 3 +8 "E326 9+ 3+12! B+ 8 "!B .9+ 523C +B6 2!+5! 5 I+3 .+ +!24 "!2 """.!+2 !++C 3"B " "!.2 I2 " 2 3 868 +B @9 + 9+ 859""4 " 2!59 +5 !+ 12! 5 42!8 5+ 8 !+3 "! 8 23D"5256 "2 3+D 24 I+3 8 64+F 9+S5"43 2! 9+ " 8 T @9 59 5!+2 +8 7+ .+D 3+ 46 8 !D D248 " 9+ B1+ 8 .D+ @9+ " 8 + +!+5 +3 9 8 .!+2 54288 5 8 ! 5 !+8 2 3 9+ 3:. 2 B2!74+8 @+!+ 52!! +3 "B2A+ 9+ !+ 1+!B2 + 9"B+ 59 8 9+!+ "!+ 9!" .9 9+2! " " 9+ 12 +! 92 9+5 6 !+ 2 8 8 1"8 " F 1+!9218 42!.+46 9!" .9 9+ 9 .946 81+5 24 I+3 7!2 59 " 52! 52C !+ "@9+!+ +48+ 8"" +2!46 8"" 7!"2346 2 3 8"" 1+! +5 46 3+D+4"1+3 2 47259 9+ B"8 @ 3+46 A "@ " " 2 +!B2 12 +!8 "" 9+ B+! 52 8 " 2 .+ +!2 " 2." 76 !+28" " 9 8 "!B24 B !24 2! @ 3 2 3 1 I@+.3+4 D+!+3 9+ !23 " 8 " 52! 52 !+ "" 9+ .!+2 +8 4 D .+!B2 !+1!+8+ 2 D+ " 9 8 7!2 59 3"4 7+!4B3+1F @9 4+ 9+ 59 2 - 1 A) 1 2 3 ' 1 9+ B"8 B1"! 2 82 ! 5 1 74 52 " 8 +!B2 6 3+D+4"1+3 3+!9+ 4 + 5+ " 9+ 59 523+B6 " 9+!+D 3+ 5+ " 9+ 54"8+ 7" 38 @9 59 +9+2! " 59@ 9 9+5"B B" 1+"14+ 8 9+ +B1928 8 42 3 76 9+ 523+B6 1" 12 .9+ .!+2 +8 !+1!+8+ 2 D+ " 9 8 54288 7+ .+ !+..+! 9+B28 +!" 3+24 I+3 2D2! 2 1+282 61+8 28 46 9+8+ 82B+ 86B12 9+ 5 !+42 " 8 B26 7+ 3+3 5+3 !"B 9+ 25 92 9" 82 38 " 44+!8 " 9+ 8" 4 "44"@+3 9+ +!24 1!"5+88 " " 9+ 12 +! + 7259 @9"8+ 1"! !2 8 " D" "4 A+ 2 3 8B2!5A 9+ 8 B14+ "4A 82@ 9+ 86B7"48 " 9+ !+- D+ 2 " " 9+ 2 9+!42 3 ! 9 9+ +@ 2! B"D+B+ +!B2 6 32 +8 !"B 9+ 52 " " 9+ B1 !+ 2 +! 9+ !2 5"E ! 88 2 @2! " $>0#2 3 8 2 19+ "B+ " R + 8 B 42! "9+ +8 9+ 5 2@2A+ .@9 59 1+!D23+3 !++5+ 2 +! 9+ 72 4+ " 242B 8 2 3 "92 74""B " 4 +!C 2 !+@9 59 .42 3 "44"@+3 9+ 3+8 ! 5C " " 9+ 12 89 !B232 + "!+ 9+ .!+2 @2! 9+ 61 524 +!B2 2! 8 9+43 9 B8+4 24"" !"B 9+2! 82 7 8 5+ 92 B"B+ " 8 +D+ 244 +!B2 8 92D+ !+5". I+3 9+ D24 + " 9+ ! 9+! 2.+ !"B 9+ B+3 +D24 5!2 . 438 2 3 9+ !25 24 2! " 1!+E + "!B2 " B+8 8 142 92 9 8 3+4 6 "" + " 5 8" !5+8 " 81 !2 " "@ 9!"78 9!" .9 9+ 9+2! 8 " 9+ 12 +!8 " 9+ B1 !+ @ 9" !+.2!3 "!+. " 24 3 +!+ 5+8 @+ B26 - 3.+ !"B 9+ 8+4+5 " " 9+ ! @"!A8 !+5+ 46 +JC 9 7 +3 B+! 52 @9+!+ +D+ 9+ "D 5+ +! 5 8B 5" 43 !+5". I+ 3+!9+ ! "B"3+! 3 8. 8+8 9+ 81 ! 8 " 9+ S 4+ 28 +!8 " "4". +T " "47+ " " 248 " +B7!2 3 2 3 " 6832+4 244 92 !+42 +8 "1! B2!6 2! 8 ! 5 " 9!" .9" +!B2 6 9+ 1!"19+ " 9+ B"D+C B+ @28 9+4B D" B7"43 @9"" $>#< .2D+ D" 5+ "9+ 81 ! @9 59 7+52B+ 25 D+ 2 5+ !6 42 +! "44"@ .D" B7"43 85 + 8 8 4 A+ (!59"@ !+.!+ +3 S 9+ 8 C 5 + 24+ "!" "78+!D2 " 2 3 3+4 +2 " +D 3+ 9+ 1+"14+ T 2 3 8"" 4+3 " "" 9+ 23"1 " $<#$ " 2 +@ 142 " " +259 . 1!25 52446 "!B 2 3 255"!3 . "" @9 59 9+ 59 43 9 8 !8 6+2!8 " !2 .3!2@8 + !+46 !"B B+B"!6 92 9+B26 25R !+ " B+592 524 8A 44 7 9+ 27 4 6 "" +J1!+88+3 9 B8+4 2 +!@9 59 9+ 8 .!23 2 6 1!".!+88+3 "" 9+ 25 24 "!4 D .B"3+4 ! 88 2 2! 8 ! 5 " 8 !+.2!3+3 28 2 +.!24 12! " .+ +!24+3 52 " 2 3 9+3!2@C .B28 +!8 2!+ +81+5 2446 !2 +3 "!B24 54288+8 @9 4+ 8" 9+! +!B2 6 89"@8 .!+2 25 D 6 9+ +8 274 89B+ " 859""48 @9"8+ "7-+5 8 B2 24 !2 .59 2.2 3 8C 1426 .9+! 3 D 3 24 6 1!"D 3 .""! 9+ ++38 1!25 524 2 3 8+8 9+ 5 " 9+ +!B2 9"B+76 "8 +! .9+2! 3 8 ! +8 +!4 9+3+5"!2 D+2! 8 2!+ 248"9 .946 2D"!+3 2 3 859""48 +259 .9+8+ 7!2 59+8 !+5+ D+ B 5C 124 8 78 3 +8 @9 4+ 1! D2 + 8 8 25C A "@4+3.+ 9+ !+ 3 " 9+ B+8 76 " +! . 5" !8+8 " " 46 3+8 . 7 248"" B"3+4C .2 3 9+ 92 34 ." " D2! " 8 B+3 B8 8 2 2! 521 24 +!4 !2 A8 8+5" 3 " 46 "" 59F 9+! 2523+B6 32 .28 @+ 92D+ 8++ !"B $&<=F @9 4+ 92 " " 9+! ! D24 @28 " 3+3 B"!+ 92 2 5+ !6 42 +! 24 9" .9 9+ ! 88 2 8 " 928 +D+!2 !25 +3 "!+ . 8 3+ 8 2 6 5" 8 3+!274+ B7+! "! +JC + 3+3 8 4 + 5+ 7+6" 3 9+ 4 B 8 " +!E

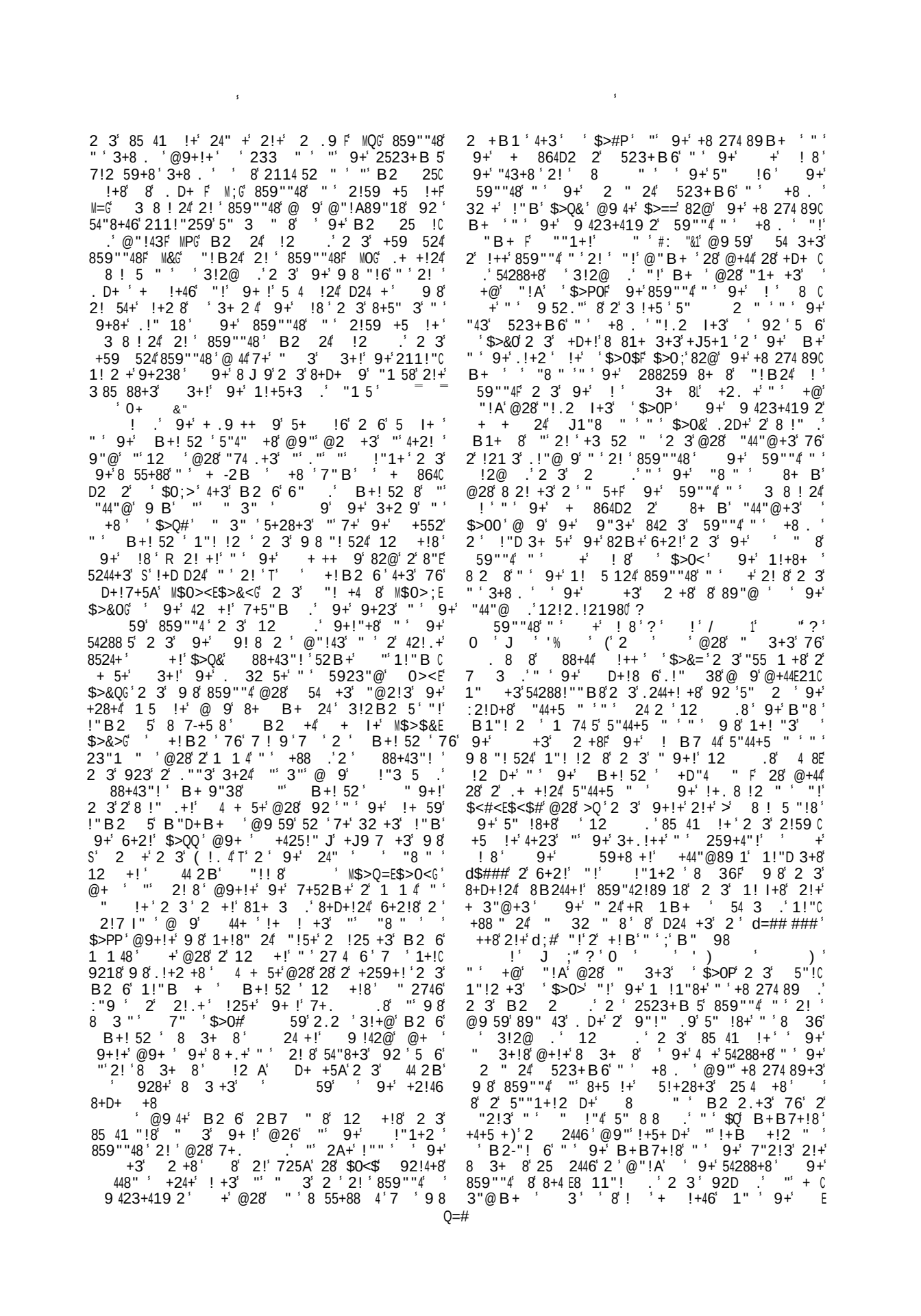
-"22 6' ' 9+' 2! 8 5' B1"! 2 5+' " ' +!4 '
8' !21 346' .!"@ . ' ' 2!59 +5 !+' 9!" .9'
9+' @"!A8' " ' 244" ' 2 3' " ' +88+4' 9 8' 5 6'
928' 5!+2 +3' 2' 3 8 5 D+' 3 D 3 24' 8 64+F' '
3!2B2 5' 4 +!2 !+' ' 2 3' 8 2.+' 1!"3 5 " ' '
9"438' 9+' !8 ' 1425+ ' 2 3' ' 9+' !+B2 .' 2! 8 '
255"!3 .' "' 9+' - 3.B+ ' " ' 5+! 2 ' 5! 58 ' '
@ 44' R 5A46' 23D2 5+' "' "55 16' 9+' 82B+' 9 .9'
1"8 "

2 A .' 2 +!' +!4 ' 2 3' 59 ' 7 ' ' 2 '
"!3+!' 3 5 4 ' "' 3+ +!B +' 8 2 3' !+83+ '
2!48! 9+' .2! ' + B2!' 2 3' 88+43"! '
+259' 5 6' 1"88+88 .' 8' 2523+B6' " ' "!B24' 2! '
2 3' +259' 248"' 8 !!+3' 76' 2' !+D D24' " ' !25 24' C
81 !2 " ' 28' 2' !+8 4 ' " ' 9+' 52!+' " ' 9+' 1!+8+ '
B1+! 24' ."D+! B+ ' "' 8+5 !+' 9+' 2! 8 5'
+3 52 " ' " ' 9+' B288+8' 28' @+44' 28' "' 1!"D 3+'
"!' 9+' 81+5 24 I+3' !2 .' " ' 2! 8 8F' 9+'
@9"4+' 5" 8 .' 2' 868 +B' @9 59' B26' 7+E'
3+ +3' 28' S 12 +! 24 T' ' 9+' 9 .9+8 ' 8+ 8+' " '
92 ' B 59E27 8+3' +!B
9 "' ?' " 9+!' +J2B14+' " ' 9+' + +5 ' " '
1"4 524' 52 " ' 1" ' 9+' 2! ' +259 .' 2 3'
5" 8+R + 46' 1" ' 9+' 2! ' 1!"3 5 " ' " ' 2'
1+"14+' B 8 ' 7+' " +3' 2 ' 9+' + 3' " ' 9 8' 7! + '
!+D +@' ' 9+' 2! 8' J1"8 " ' " ' $>&0'
246 ' 9+ ' X2' .+".!219 524' +J1!+88 " T' 1!+C
8+ +3' 2' 5"44+5 " ' " ' @"!A8' @9 59' .2 +3' 2'
.!+2 +!' B7+!' " ' 1! I+8' 92 ' @28' 2@2!3+3' "'
9+' 2! 8 8' " ' 2 6' " 9+!' 2 " 24 6 ' '
' 9+8+' @"!A8' !+. " 24' 3 +!+ 5+8 ' 7" 9' " ' 5" C
5+1 " ' 2 3' " ' +59 R +' @+!+' 8"' 892!146' 25C
5+ +3' 92 ' 9+' 9 8 "! 2 ' 28R 24+' (442! '
!2 8+3' 2 ' +4"R + ' 14+2' "!' 9+' "!B2 " ' " ' 2'
! +' B "3+B' 24 2 ' 2! ' 28' 9+' 8 55+88"!' " ' 9+'
"B72!3 ' 9+' 852 ' 2 3' 9+' +21"4 2 F' C
3 52 .' 28' 2' B+2 8' "' 9 8' + 3' 9+' !2 8 "!C
B2 " ' " ' 9+' 1!"D 5 24' 2523+B +8' @ 9' 9+ !'
2 R 2 +3' "!B 42+' "' 859""48' @9 59' 89" 43'
+259' 9+' D+!824 ' 728 5' 1! 5 14+8' " ' 3+8 . '
2 3' 5"B1"8 " ' "E326 ' 2 ' 2' 3 8 2 5+' " '
"! 6' 6+2!8 ' 24 9" .9' 9+' 8 " ' 8' " ' 8"' 5"BC
14+ +' 28' 9+' + 9 8 28 5' 12 ! " ' 5" 43' 92D+'
3+8 !+3 ' 8 44' 9+' 1!"5+88+8' " ' 278"!1 " ' 2 3'
288 B 42 " ' 92D+' 8"' 2!' 1!".!+88+3' 92 ' 9+'
24 2 ' 2!59 +5 ' 85 41 "!' "!' 12 +!' B26' 7+'
!+5". I+3' 76' 9 8' 5!+2 " 8 ' 28' 9+' ' " ' 2 '
"!.2 5' 2 " ' 9+' B "3+! ' 81 ! ' @24A8' 27!"23'
' "B+ ' 9+' !+5". I+3' 8 !" .9"43' " ' 54288 5'
!23 " 8 ' 2 3' ' 8' 3 5 4 ' "' !+24 I+' ' (5 "!'
B2 +4L8' 521 24 ' 92 ' 4 4+' B "!+' 92 ' 2' 5+ C
!6' 2." ' 9!" .9' 9+' 4 + 5+' " ' 9+' 85 41 "!'
2 "D2 ' 9+' "B2 ' 523+B6 ' 2B+3' !"B'
9+' 255!+3 +3' 21"8 "4 5' 12 +!' ' A+ ' "7C
2 +3' 9+' B " "1"46' " ' 2! 8 5' +259 . ' 9+'
"1+ .' " ' 9+' S' 244+!6' " ' "3+! ' ! ' T' '
"B+' 12!244+48' 9+' 7!+259' B23+' 76' 9+' 2!B6'
" ' 9+' .' ' 9+' @2448' " ' 9+' 212' 6 ' 9+'
+ . ++! .' " ' 9+' 8 7@26 ' 9+' 2!59 +5 !24'
!+2 B+ ' " ' 9+' +@' 2425+' " ' : 8 5+ ' 2 3' " '
9+' D 4428' ' 9+' !+5+ 46' 5" 8 ! 5 +3' !28 +D+E'
! +' R 2! +!' 89"@' 92 ' "!+ . ' 4 + 5+' 928' 7++ '
1+!B +3' "' B .4+' @ 9' 2 D+' 24+ ' "' 9+'
B2A .' " ' 2' +@' +1"59 ' 9+' 2! 5 24' 2523+B 5'
81 ! ' !"B' 8' "!B+!' 8+2 ' ' 9+' 523+B6

" ' ' A+' 3"B 2 +3' 244' 9+' 2! 8' ' "B+' 7 '
"@' 4 7+! 6' 8' 8"' "B 1!+8+ ' ' 9+' 859""48' 92 '
+D+ ' "!+ . +!8' !+81" 3' "' 8' 5244F' 9+' 8 3+ 8'
' 2!59 +5 !+' " ' 9+' % ' -)6 ' !+8 C
3+ ' 2 ' 9+' !+ 59' 523+B6' 92D .' 7++ '
A "@ ' "' 8+ 3' 725A' "' 2! 8 ' ".+ 9+!' @ 9'
9+ !' "74 .2 "!6' 8 64 8 5' 3+8 . 8' 2 3' !+8 "!2C
" 8 ' !+2 B+ 8' " ' 9+' B "8 ' B "3+! ' 1!"74+B8 '
8 59' 28' 9+' 859+B+' "!' 2' B "3+4' @"!A .B+ L8'
+ +B+

' 4" .E8 2 3 .' !+1 2 " ' 2 3' 25A "@4C
+3.+3' B+! ' 2!+' 9+' 2! ' 859""48 ' "!' 2523+B +8 ' " '
214+8 ' 4"!+ 5+' 42 ' 2 3' ! F' 9+' 1!"" ' " ' '
9+ !' +J5+44+ 5+' +J 8 .' ' 9+' B+ ' @9"B' 9+6'
8+ ' " ' ' 9+' 42 +!' 924 ' " ' 9+' + ++ 9'
5+ !6F' 214+8' 24" +' 1!"3 5 .' 9!+' " +3'
B28 +!8' ' 12 . ' 24 II ' "!+ ' 2 3'
59+ ' 9+8+' 8 " 8' 1! B2! 46' " +!'
8 ! 5 " ' ' 12 .' 2 3' 85 41 !+' @9 4+'
5" !8+8' ' 2!59 +5 !+' 2!+' ' 8"B+' 528+8 ' 28' 2 '
! ' !+4+.2 +3' "' 9+' + . ++! .' 859""48
' 428 ' 1" ' " ' !+8+B742 5+' 7+ @++ ' +!C
B2 6' 2 3' 246 ' 28' 2 ' + +5 ' " ' 52 " ' B26'
7+' 8++ ' ' 9+' 3+D+4"1B+ ' " ' 9+' 3 8 ! 24' 2! 8 '
@9 59' 7+.2 ' 27" ' 9+' 6+2!' $>>#' 2 3' 8 8 44'
' 25 D+' 1!".!+88' 4 9" .9' 9+' 428 ' 5" !6'
"' -" ' ' 9+' 2! 8' 2 3' 5!2 8' B "D+B+ ' "4C
4"@ .' ' 9 8' !2 5+' +!B2 6' .42 3' 2 3'
8 ! 2' 246 ' 8"' 3" .' 8 B146' !+ +@+3' 5" C
+5 " ' @ 9' 9+!' 2! 8 8' " ' 9+' 334+' .+8' 2 3'
" ' 9+' + 2 882 5+' @9"' 3 3' " ' 3 832 ' "'
1!"3 5+' 9+' 9 B74+8 ' "7-+5 8' " ' 3"B+8 5' 8+!DC
5+' 8 5+' 9+6' .4"! +3' 9+B' @ 9' 2' " 59'
" ' .+ 8' "8 ' +!+8 .' !+8 4 8' " ' 9 8'
B "D+B+ ' @+!+' 8++ ' 2 ' 9+' ! ' J1"8 " ' " '
$<#QF' 92 ' 5 6' 2 3' 42 ' 7+ .' 9+' 5+ +!8'
" ' 8 ! 5 " ' ' 9+' 3+5"!2 D+' 2! 8 ' ' 8"B+'
8 2 5+8 ' 248"' 9+' @"!A89"18' " ' 2! ' 2! 82 8 '
"!' 9"8+' +D+ ' " ' 5"B B+!5 24' !B8' 1!"3 5 .'
"7-+5 8' " '2! ' 2A+' 9+' 1425+' " ' 859""48F' 2' 868 +B'
" ' 8 ! 5 " ' " 3+3' " ' 9 8 "! 524' 1!+5+3+ '
2 3E' @9 59 ' 24 9" .9' 1! D2 +46' 5" 3 5 +3 ' 8'
9+' 82B+' ' 1! 5 14+' 28' 9+' B+ 9"3' 1 !8 +3'
2 ' N ! 59' 3+!' ."D+! B+ 24' 5" !"4 ' 2 3'
2 B .' "' +' ' " +' 1+!8" ' 9+' 2! 8 ' 2 3' 9+'
2! 82

9 8 ' 9+' 5" 54 8 " ' "' 7+' .2 +3' !"B' 2'
5 !8"!6' !+D +@' " ' 9+' 2! ' 859""48' 2 3' 9+' +J 8 .'
2! ' + 3+ 5 +8' ' !"1+' 8' 92 ' +D+!6@9+!+' '
9+' 43' "!43 ' +D+ ' ' 9+' B "8 ' 5" 8+!D2 D+'
5 +8' 2 3' 8 " 8 ' 9+!+' 8' 2' B "D+B+ '
@9 59 ' ' 88 2 ' @" 43' 7+' +!B+3' S ." .' "C
@2!3' 9+' 1+"14+ T' '
++' 9+' D2! " 8' 2! 54+8' " ' 9+' +3 52 " 24'
868 +B ' " ' +259' 5" !6' "!' 44' 8 2 +B+ ' " ' 9+'
D2! " 8' 2! ' 859""48F' 248"' + + * 7 ! &'
* + !) 6' ') ' 0+ &"6' ") 6'
! ( ) 6 + 5
+3' 2 +8 ' ? ' 8 36 .' 9+' 2! ' 859""48'
' 8' +5+882!6' "' 3 8 . 89' 7+ @++ ' 9+' 3 C
+!+ ' 61+8' " ' 859""48' ' @9 59' 9+' D 8 24' 2! 8'
2!+' 2 .9 ' 4 9" .9' 8"B+' " ' 9+' 859""48'
54 3+' 8+D+!24' 3+12! B+ 8' 9+' B2-"! 6'
52 ' 7+' 54288+3' 3+!' " ' " ' 9+' "44"@ .' 9+238'
M$' +' 2! 8' 859""48 ' @9+!+' 3!2@ .' 12 .



" ++8 " 8 1 1 48 ! 8 8 2 3 8 3+ 8 + 3 . "' B2A+ 2! ' 2 1!" +88 " @9"' 92D+ @"!A+3 9+ 4 + 54288+8 ;' B" 98 B26 7+ +4+5 +3 B+B7+!8 " 9+ +2. + 9+ +2. + 8 2 8 "5A9"43+!' 9+ B+! 52 + ! 8 43 . 2 3 "55 1 +8 9+ 11+!' 4""!8 " 9+ 7 43 . @9 4+ 9+ .244+! +8 " 9+ B2 4""!' 2!+ 3+D" +3 "' 9+ 2 24 +J9 7 " " 9+ 2 " 24 523+B6 " +8 . 9+ B+! 52 2 +!' "4"!' "5 + 6 +@ "!A 2 +!' "4"!' 4 7 2 3 9+ !59 +5 !24 +2. + 9 8 859""4 8 9+ B"3+4 " @9 59 B2 6 " 9+!8 9!" .9" 9+ 5" !6 92D+ 7++ "!.2 I+3 9+ ++8 2!+ !"B d;# "' dO# "!' 9+ @ +!' +!B " > B" 98 d;P 9+ +D+ . 54288+8 "!' 9+ 2 !326 54288+8 2 3 dQ# "!' 9+8 BB+!' 859""4 +@ "!A 8 BB+!' 859""4 8 248"' B2 2 +3 2 ""38 "5A ! I+8 2 3 859"42!89 18 "' 9+ B7+!" $O 2!+. D+ 9+ 859""4 9+!+ 8 248"' 2 2 24 5"B1+ " "!' 859"42!89 18 "1+ "' 244 2! 8 3+ 8 9+ +3 2 +8 2 3 2 232 @ 9 9+ +J5+1 " "' +@ "!A 6 @9+!+76 $# 859"42!89 18 2!+ 2@2!3+3 "!' 9+ 7+8 @"!A 89"@ 9+ + !"44B+ 2D+!2.+8 $#### 3 ! .' 9+ @ +!' @ 9 $= 8 ! 5 "!8 9+ 8 BB+!' 9+!+ 2!+ 27" $## 8 3+ 8

0 % (' + !25+8 8 "! . 725A "' $>#Q @9+ @28 1!"1"8+3 " 3 9+ +@ "!A 523+B6 " 9+ + ! 8 5+!8 @+!+ +4+5 +3 " +5 ;' " 92 6+2! 2 3 " +7 $Q $>#> 2 592! +!' @28 "7C 2 +3 3+!' 9+ 2B+ " 9+ B+! 52 523C +B6 " ! 8 9"! 46 7+ "!+ 8+5 ! . 8 592! +!' "7+! D .8 " 9+ B72882C 3"!' "' !2 5+ 1 !5928+3 76 "!3+!' " 9+ ! 8 ++8 2 3 8+ "' +@' "!A 2 B7+!' " 528 8 !"B 9+ 2 R + 1!"72746 9+ !8 528 8 +D+!' 7!" .9 "' 9 8 5" !6 9+ C 8 " 426 3"!B2 "!' B2 6 6+2!8 7 @28 !+D D+3 76 2 +J9 7 " $>$& 2 3 :2 2!6 $>$> :"9 ! B7 44 @28 +4+5 +3 1!+8 3+ ! .' 9+ "44"@ .' 8 BB+!' 9+ 5"44+5 " " 528 8 @28 "1+ +3 "' 8 3+ 8 9+ B"! .8 !"B &' "' >' "154"5A @ 9 44 2B 421 28 A++1+!' 9+ 9" !8 @+!+ 5" C D+ + +@ 2 + 3+3 2 3 9+ !8 2 +B1 2 " 3 .' 2 '2!' 859""4 +@ "!A 2 4+3 " 9+!' 8 55+88 4 2 +B1 "' "1+ 9+ 5"44+5 " " 528 8 "' 8 3+ 8 4+3 "' 2 B++ C .' " 2! 8 8 " "D >' $>QP 9+ !""B8 " 9+ +@ "!A 8 "! 524 "5 + 6 2 3 9+ +@ "!A !2@ .' 88"5 2 " @28 "!B+3 @ 9 " " 9+ !2@ .' 88"5 2 " " " :2 $>' $>Q& 9+6 "!.2 I+3 9+ 2 " 24 523+B6 " +8 . "' 7+ 5"B1"8+3 2 3 ."D+! +3 + !+46 76 2! 8 8 @28 2 !8 " 46 2 +D+ .' 3!2@ .' 54288 7 B+ +J9 7 " 8 @+!+ 8 55+88 446 B2 2.+3 2 3 9+ 859""4 + 42!.+3 2 3 "!' B2 6 6+2!8 9+ 2523+B6 "55 1 +3 8 "@ 7 43 .' 2 " ! 9 D+ +2 3 Q;3 !++ 5+ 5 "7+! $><<' 9+ 859""48 92D+ 7++ 4"52 +3 2 B8 +!32B D+ +2 3 $#< 9 !++ " 2!' !"B "4 B7 2 D+!8 6 @ 9

@9 59 9+6 2!+ "@ 2 4 2 +3 9+ +J9 7 " 8 9"@+D+! 2!+ 9+43 9+ B+! 52 + ! 8 43 .' 2 Q$P +8 'P0 9 !++ 9+ 8 ! 5C " 8 1 !+46 2523+B 5 " +J5+1 8 9+ 54288 + 59 . 9+!+ 2!+ 27" QP# 8 3+ 8 3+! $# 8 ! 5 "!8 44 8 ! 5 " 8 !++ 7 +J2B 2 " 8 B 8 7+ 1288+3 "' 8+5 !+ 23B 88 " 2 3 "' 2114 52 "D+! ;# 6+2!8 " 2.+ 8 255+1 +3 9+!+ 2!+ B+!" 8 1! I+8 2 3 859"42!89 18 54 3 .' 9+ "" +6 +C B"! 24 !2D+4 .' 59"42!89 1 " d0P# 2 6+2! "!' Q 6+2!8 2 3 9+ 2I2! 8 !2D+4 .' 59"42!89 1 9 8 428 5" 8 8 8 " d$#### 2 6+2!' "!' ;' 6+2!8 2 3 8 "1+ "' 2 6 B24+ 5 I+ " 9+ +3 2 +8 @9"' 52 8 55+88 446 1288 9+ +J2B 2C " 8 @9 59 2!+ 9+43 +D+e6 9 !3 6+2!' 2 9+ 523+B6

$ 1 $? 0 $ % , (2 @28 "!.2 I+3 $>#P 2 2 B++ .' 9+43 3+1+ 3+ 5+ 244 2 3 89"! 46 2 +! 2 7 43 .' @28 +!+5 +3 @9 59 @28 "55 1 +3 "!' 924 2 5+ !6 $>O& 9+ 1!+8+ 7 43 .' @28 3+3 52 +3 5" 2 8 2 1+!B2 + 5"44+5 "' "12 .'2 3 85 41 !+ 54 3 .' 9+ 244+!6 " 2 " 24 "! !2 !+ 9+ +B14+ "44+5 " " " 3+! B+! 52 2 .8 2 3 9+ 78" "44+5 " " " 12 C .8 76 !"1+2 2! 8 8 " 9+ + ++ 9 5+ !6 24 +J9 7 " 8 " " 4 12 .8 2 3 85 41 !+ " B 2 !+8 " @2 +! 5"4"!8 2 3 " 2!59 +5 !+ 2!+ 9+43 9+ .244+! +8 9+ 859""4 2 1!+8+ 928 2 !+. 8 !2 " " 27" =## @ 9 $# 8 ! 5 "!8 9+ 5" !8+ 8 8 ! 5 46 2523+B 5 2 3 54 3+8 9+ 2 R + 4 +2 3 9+23 12 .' 44 8 !2 " 2 3 B"3+4C . 9+!+ 2!+ Q +!B8 9+ 859""4 6+2!F ++8 dP# 2 +!B 9+ !+88" 3 + 274+8 9+ 2523+B6 "' 2@2!3 dP## !2D+4 .' 859"42!C 89 18 "' Q# "!' B"!+ 8 3+ 8 +259 6+2! 9+ 3+12! B+ 8 " 12 . 85 41 !+ 2 3 44 8C !2 " 9+!+ 2!+ 8+D+!24 " 9+!' 1! I+8 " 4+88+!' 2B" 8

= 1 +"' " ? 0 % '% (8 B2 2 +3 9+ "!5"!2 ! 244+!6 2 3 928 7++ '12! " 9+ !+. 42!' @"!A " 92 8 " 8 5+ @28 5"!1"!2 +3 $>O# 9+ 2523+B 5 8 7-+5 8 24" +2!+ 2 .9 2 3 9+ !+. 8 !2 " 8 27" QQP @ 9 & C 8 ! 5 "!8 9+!+ 2!+ 326 2 3 +D+ .' 54288+8 24 " @9 59 2!+ !++

0 % % @28 5"!C 1"!2 +3 76 5 " " .!+88 " 2!59 ;' $<#P S "!' 9+ 1 !1"8+ " B2 2 .' 2 8 " "' 1!"B" +' 9+ 8 36 2 3 1!25 5+ " 9+ +2! 8 2 3 "' 2 3 2 3 8 B 42 +' 9+ +3 52 " 2 3 !2 .' " 2!59 +5 8 12 +!8 85 41 "!8 2 3 " 9+!' 2! 8 8 76 + 274 .' 8 59 5 I+ 8 " 9+ +3 2 +8 28 8924 7+ 8+4+5 +3 76 5" B1+C " !"B 2B" .' 9"8+ @9"' 92D+ 1288+3 @ 9 9" "!' 9!" .9 4+23 .' +59 524 859""48 "!' 92D+ 7++ +R 2446 @+44 R 24 +3 76 1! D2 + 8 ! 5 " "!' 8 36 "' 3+D+4"1 9+ !' 1"@+!8 2 3 5"B14+ +' 9+ !' !2 .' 3+!' 9+ B"8 2D"!274+ 5" 3 " 8 " 3 !+5 " 2 3 8 !!" 3C .8 T 9+ 523+B6 "55 1 +8 9+ (442 !2E

Q=$

"! ʼ ʼ "B+ʼ 246ʼ 2 3ʼ 928ʼ 2 ʼ + 3"@B+ ʼ 3ʼ " ʼ +2!46ʼd$ ### ###ʼ ʼ 8 9+ʼ 9"B+ʼ " ʼ 9+ʼ D2! " 8 9"43+!8 " ʼ 859"42!89 18 @9"ʼ 52!!6ʼ " ʼ 9+ !ʼ @"!Aʼ 3+!ʼ 9+ʼ . 32 5+ʼ " ʼ 9+ʼ !+5 "!ʼ " ʼ 9+ʼ 523+B6ʼ 9+ʼ 1! 5 124ʼ 859"42!89 18 2D2 4274+ʼ 2!+ʼ 9"8+ʼ " ʼ 9+ʼ 523+B6ʼ 8+4 ʼ@9 59ʼ "@ʼ 8+ 38ʼ "ʼ !"1+ʼ +259ʼ 6+2!ʼ "!ʼ ;ʼ 6+2!8 " +ʼ 2!59 +5 ʼ " +ʼ 85 41 "!ʼ 2 3ʼ " +ʼ 12 +!F 9+ʼ 2I2! 8 859"42!89 1ʼ "!ʼ B !24 12 .F 9+ʼ 2 .+ʼ 859"42!89 1ʼ ʻ12 .F 9+ʼ +92!ʼ 859"42!89 1ʼ "!ʼ 85 41 !+F 9+ʼ 5 B ʼ 9+ʼ "5 + 6ʼ " ʼ +2 JE ! 8ʼ 9+ʼ "! +44ʼ 9+ʼ " 59ʼ 2 3ʼ 8+D+!24 " 9+!8 ʼ 2!59 +5 !+

59""48 " ʼ +8 . ʼ ? ʼ B" .ʼ 9+ʼ 859""48 " ʼ 3+8 . ʼ B2 6ʼ @ 44 7+ʼ " 3ʼ 5" 3 5 .ʼ 252C 3+B 5ʼ 5" !8+8 8 3+ʼ 6! 8 3+ʼ @ 9ʼ 9+ !ʼ 3+12! C B+ ʼ " ʼ 3+8 . ʼ 2 3ʼ 248"ʼ 54288+8 ʼ 9+ʼ D2! " 8 5!2 8ʼ8 59ʼ 28 7""A7 3 .ʼ1" +!6ʼ2 3ʼ B+ 24 @"!Aʼ 9+ʼ B+!" 8 8B244 2! 8 2 3ʼ 5!2 8 8"5 + +8 852 +!+3"D+!ʼ 9+ʼ5" !6 "!B ʼ5+ +!8 "!ʼ +259 .ʼ 9+ʼ 5!2 8ʼ2 3ʼ B2 6 92D+ʼ824+8C !""B8 "!ʼ 9+ʼ 3 81"82 " ʼ B+B7+!8 @"!Aʼ ʼ B7+!ʼ " ʼ 9+8+ʼ8"5 + +8 2!+ʼ +3+!2 +3ʼ2 3ʼ 9+ʼ "8 " ʼ "5 + 6ʼ " ʼ ! 8 2 3ʼ !2 8 8+!D+8 28 9+ʼ 9+23R 2! +!8 " ʼ 9+ʼ 2 " 24 +2. +ʼ " ʼ 2 3 C 5!2 ʼ "5 + +8

- 1ʼ "?ʼ 0 ʼ ʼ 9) ʼ ('ʼ ʼ + ʼ "55 1 +8 8 "@ ʼ 7 43 .ʼ @9 59ʼ@28 +!+5 +3ʼ ʼ $<#0ʼ D+!ʼ 0## 8 3+ 8 !+5+ D+ʼ 8 ! 5 " ʼ !"B ʼ =;ʼ +259+!8 ʼ 7" 9ʼ 326ʼ 2 3ʼ +D+ .ʼ 54288+8ʼ 9+ʼ 5" !8+8 54 3+ʼ 9+ʼ 8 24 2523+B 5ʼ !2 .ʼ ʼ 3!2@ .ʼ 12 C . ʻ2 3ʼ85 41 !+F 9+ʼ2!59 +5 !24 3+12! B+ ʼ 928 "D+!ʼ ;## 8 3+ 8F 9+!+ʼ 8ʼ2ʼ "!B24 3+C 12! B+ F 2 3ʼ 81+5 24 54288+8 "!ʼ 44 8 !2 " ʼ 2 3ʼ "!ʼ 3+8 . ʼ 2 3ʼ 2114 +3ʼ 2! 8ʼ 9+ʼ ++8 2!+ʼ "B 24ʼ 9+!+ʼ 2!+ʼ 8+D+!24 1! I+8 2 3ʼ 859"4C 2!89 18ʼ 54 3 .ʼ 9+ʼ +92!ʼ 859"42!89 1ʼ ʼ 85 41 !+ʼ "1+ ʼ "ʼ 2 6ʼ B+! 52 ʼ B2 ʼ " ʼ "D+!ʼ ;0 6+2!8 " ʻ2.+ʻ2 3ʼ+ 4 .ʼ "ʼ=6+2!8 " ʼ !"C 1+2 ʼ 8 36

- 1ʼ "?ʼ 0 ʼ)) ʼ ('2 ʼ ʼ @28 5"!1"!2 +3ʼ ʼ $>0#ʼ2 3ʼ 54 3+3ʼ 28 " +ʼ " ʼ 8ʼ S ʼ"7-+5 8ʼT ʼ "ʼ 1!"D 3+ʼ"11"! +8ʼ2 3ʼ B+2 8ʼ "!ʼ. D .ʼ 8 ! 5 " ʼ ʼ3!2@ .ʼ12 C . ʼ B"3+4 .ʼ2 3ʼ3+8 . ʼ@ 9ʼ 9+ !ʼ 3 8 ! 24 2114 52 " ʼ 9!" .9ʼ4+5 !+8ʼ1!25 524 859""48ʼ 2 3ʼ 2ʼ 81+5 24 4 7!2!6ʼ 9+ʼ B 8+ B ʼ 7 43 .ʼ ʼ "14+6 R 2!+ʼ @28 "1+ +3ʼ : 46ʼ = $>0& ʼ2 3ʼ 8"" ʼ 2 +!ʼ 2!!2 .+B+ 8 @+!+ʼ B23+ʼ @9+!+76 9!++ʼ!""B8 ʼ 9+ʼ728+B+ ʼ@+!+ʼ288 . +3ʼ !++ʼ " ʼ!+ ʼ "ʼ 9+ʼ 59""4 " ʼ !2@ .ʼ2 3ʼ 2 .ʼ 9+ ʼ7+ .ʼ5" 3 5 +3ʼ76ʼ "ʼ ! 3B2 ʼ2 3ʼ ! ʼ 44 2B ʼ B B+!ʼ 9 8ʼ 2!!2 .+B+ ʼ@28 5" +3ʼ@ 9ʼ 9+ʼ 8+ʼ " ʼ233 " 24 !"" B ʼ 4 9+ʼ !+B "D24 " ʼ 9+ʼ B 8+ B ʼ "ʼ 8 +@ʼ7 43 .ʼ @9 59ʼ@28 "1+ +3ʼ ʼ 9+ʼ2 B ʼ " ʼ $<#<ʼ 9+ʼ 859""4 8 "@ 8 244+3ʼ ʼ2ʼ7 43 .ʼ3+8 . +3ʼ 2 3ʼ+!+5 +3ʼ "! ʼ" ʼ . " ʼ D+ +ʼ23-" C .ʼ 9+ʼ 8+ B ʼ " ʼ +ʼ ! 8ʼ 8 ! 5 " ʼ 8 " +!+3ʼ ʼ3!2@ .ʼ12 .ʼ B"3+4 .ʼ2 3ʼ3+C 8 . ʼ@ 9ʼ 8 114+B+ 2!6ʼ 5" !8+8 ʼ 2 2 "B6ʼ 2 3ʼ 1+!81+5 D+ʼ 9+ʼ 859""4 8 "1+ ʼ "ʼ 7" 9ʼ 8+J+8F 9+ʼ B7+!ʼ " ʼ1 1 48 ʼ $<#<E$# @28 Q&; ʼ " ʼ @9"B ʼ 0=ʼ @+!+ʼ ʼ 9+ʼ 3+12! B+ ʼ " ʼ 3+8 . F

9+!+ʼ 2!+ʼ $;ʼ 8 ! 5 "!8ʼ ʼ R +ʼ +2 !+ʼ A "@ ʼ 28 9+ʼ 28 +!!8 4288ʼ 8 9+ʼ 1"8 C .!23 2 +ʼ 5" !8+ʼ @9"8+ʼ "7-+5ʼ 8 "ʼ 8 ! 5ʼ 23D2 5+3ʼ1 1 48 ʼ 9+ʼ 2!ʼ " ʼ 5" 8 ! 5 .ʼ 2 3ʼ 12 .ʼ 1 5 !+8ʼ 9+8+ʼ 81+5 24 1 1 48 "!3 C 2! 46 92D+ʼ 8 3 "8 "ʼ 9+B 8+4D+8ʼ B"3+48 2!+ʼ ! 89+3 @9+ ʼ !+R !+3ʼ 2 3ʼ 5! 5 8B8 2!+ʼ . D+ ʼ 76ʼ B+B7+!8 " ʼ 9+ʼ !+. 42!ʼ 5"!18 " ʼ C 8 ! 5 "!8ʼ 9+!+ʼ 2!+ʼ ;ʼ +!B8 ʼ 9+ʼ 859""4 6+2!F ++ʼ "!ʼ 9+ʼ6+2!ʼ d$##ʼ 9+ʼ859""4 2@2!38 $& 859"42!89 18 + 4 .ʼ "ʼ !++ʼ " F 9+ʼ 2 .+ʼ !2D+4 .ʼ859"42!89 1ʼ"1+ ʼ "ʼ 7" 9ʼ8+J+8ʼ 8 2@2!3+3ʼ "!ʼ .+ +!24 +J5+44+ 5+ʼ 2 3ʼ 5" 8 8 8 " ʼ d>## 2ʼ 6+2!ʼ "!ʼ Q 6+2!8!ʼ !2D+4F 9+!+ʼ 2!+ʼ 8+D+!24 " 9+!ʼ B" +6ʼ 1! I+8ʼ2 3ʼ3 14"B28 2!+ʼ . D+ ʼ 1" ʼ 2114 52 " ʼ "ʼ 9"8+ʼ @9"ʼ 92D+ʼ 4 44+3 9+ʼ !+R !+B+ 8 " ʼ 9+ʼ " 5 4ʼ 9+ʼ5" !8+ʼ ʼ3+8 . ʼ 8ʼ5" 3 5 +3ʼ76ʼB+2 8 " ʼ 1!"74+B8ʼ76ʼ 9+ʼ 8 36ʼ " ʼ 9+ʼ 3+D+4"1B+ ʼ " ʼ 3+8 . ʼ 2 3ʼ 8 !+42 " ʼ "ʼ 85 41 !+ʼ12 .ʼ 2 3ʼ 2!59 +5 !+ʼ 9+!+ʼ 2!+ʼ 248"ʼ 4+5 !+8 76ʼ 81+5 24 8 8 . D+ ʼ2ʼ 9+ʼ859""4 "!ʼ2ʼ 9+ʼB 8+ B ʼ 9+!+ʼ 8 2ʼ5" !8+ʼ ʼ B+ 24 @"!Aʼ 2 3ʼ " +ʼ ʼ +! "!ʼ3+5"!2 " ʼ2 3ʼ 9+!+ʼ 8ʼ2ʼ1"8 .!23 2 +ʼ 5" !8+ʼ "!ʼ 9"8+ʼ @9"ʼ 3+8 !+ʼ +59 524 !2 .ʼ ʼ 1!" +88 " 24 @"!Aʼ 1 48 B 8ʼ 7+ʼ "D+!ʼ $& 6+2!8 " ʼ 2.+ʼ 9+ʼ " ʼ ++ʼ 8 d$$# 2ʼ 6+2!F +D+ .ʼ54288+8 dQ# ʼ 9+!+ʼ 8ʼ2ʼ !2D+4 .ʼ 859"42!89 1ʼ " ʼ dQ## 2ʼ6+2!ʼ4 B +3ʼ "ʼ B+ ʼ8 C 3+ 8ʼ 2ʼ 859"42!89 1ʼ 1!"D 3 .ʼ 2ʼ D 8 ʼ "ʼ 2 ʼ B+! 52 ʼ 8+ Bʼ " ʼ +ʼ ! 8ʼ2 3ʼ 5289ʼ 1! I+8 "!ʼ 9+ʼ 7+8 ʼ@"!Aʼ 3" +ʼ ʼ3+8 .

-)((1ʼ "J" ? ʼ 0 ʼ ʼ ') ʼ) 1ʼ " 3+3ʼ ʼ $>>>ʼ "@ʼ "55 1 +8 !"" Bʼ ʼ 9+ʼ 47! .9ʼ ! ʼ 244+!6ʼ2 3ʼ 8 9+!+ "!+ʼ ʼ 54"8+ʼ " 59ʼ@ 9ʼ 9+ʼ 1+!B2 + ʼ2 3ʼ5 !!+ ʼ +J9 7 C " 8ʼ 9+!+ʼ @+!+ʼ ʼ $<#<E$#ʼ Q&& 8 3+ 8 3+!ʼ & 8 ! 5 "!8ʼ 9+ʼ 5" !8+8 54 3+ʼ 9+ʼ 2523+B 5ʼ 7!2 59+8ʼ2 3ʼ 248"ʼ 3+8 . ʼ B+ 24@"!Aʼ 2 3ʼ 2 "!B24 5" !8+

% 1ʼ 999" ? ʼ 0 ʼ ʻ9) ʼ (' % ʻ928 9+ʼ42!.+8 ʼ B7+!ʼ " ʼ8 3+ 8ʼ2 3ʼ " +!8 81+5 24 23D2 2.+8 "!ʼ 8 36ʼ "@ .ʼ "ʼ 9+ʼ 25ʼ 92ʼ 9+!+ʼ 2!+ʼ " 3ʼ 9+ʼ 5"B7 2 " ʼ " ʼ 9+ʼ 2!ʼ B 8+ Bʼ2ʼ@+ E+R 11+3ʼ4 7!2!6ʼ2ʼ42!.+ʼ2 3 C "! Bʼ@ 9ʼ!+. 42!ʼ5" !8+ʼ " ʼ4+5 !+8ʼ 5 !!+ ʼ +J9 7 " 8 " ʼ@"!Aʼ 76ʼ "!+)ʼ2 3ʼ B+! 52 ʼ 2! 8 8ʼ2 3ʼ2ʼ8 2 ʼ " ʼ27" ʼP# 8 ! 5 "!8ʼ 9+ʼ 2 + 32 5+ʼ "!ʼ 9+ʼ 6+2!ʼ + 3 .ʼ 26ʼ;$ʼ $<#<ʼ @28 ;QQQʼ @9 59ʼ 54 3+3ʼ 8 3+ 8ʼ ʼ 9+ʼ 326ʼ +D+ .ʼ 2 !326ʼ2 3ʼ 8 B B+!ʼ54288+8ʼ 9+!+ʼ 2!+ʼ 8+D+ ʼ3 8 5ʼ 859""48 @ 9ʼ 3 +!+ ʼ1! 5 C 1248 2523+B 5ʼ3+5"!2 D+ʼ3+8 . ʼ "!B24ʼ2!59 C +5 !+ʼ M@9 59ʼ 8ʼ2 4 2 +3ʼ @ 9ʼ 9+ʼ !B" !ʼ 8 +ʼ " ʼ +59 "4".6G ʼ+D+ .ʼ 2 !326ʼ2 3ʼ 8 B B+!ʼ 9+ʼ 859""4 8 "!.2 I+3ʼ 1" ʼ 9+ʼ !+ 59ʼS ʼ2 +4 +!ʼ2 3ʼ 5" 5" !8ʼT ʼ868 +B ʼ 9+!+ʼ 2!+ʼ @"ʼ "!+ . ʼ !2D+4 859"42!89 18 " ʼ dQ=P 259ʼ2 3ʼ @"ʼ B+! 52 ʼ 859"42!89 18 " ʼ dQP# 2 3ʼ d$QP !+81+5 D+4-!ʼ 9+ʼ ++8 2D+!2.+ʼ d;# 2ʼ +!Bʼ "!ʼ 9+ʼ 9!++ʼ@ +!ʼ +!B8ʼ2 3ʼdQP "!ʼ 9+ʼ 8 B B+!ʼ +!B ʼ 2!.+ʼ 859+B+8 2!+ʼ !+R + 46ʼ 52!! +3ʼ " ʼ 76ʼ 9+ʼ 859""4F 8 59ʼ 28 9+ʼ B !)ʼ 3+5"!2 " ʼ " ʼ2ʼ 74 5ʼ 59""4 2 3ʼ 9+ʼ 2.+2 ʼ . D+ ʼ ʼ $<#<

59 43!+ l8 54288+8 9+ ++8 D2!6 !"B dQ 2 B" 9 9+ 8A+ 59 54288 "d$### 2 8+28" "!
244E326 @"!A 9+1"! !2 54288 "+J2B
2 " 8 2!+ +5+882!6
$ 9) 1 " 3+3 $>>0 . 2D+ 8 ! 5
" 8 59""4 " +2 3 114 +3 ! 8
3 ! . $<#>E$<#< "2 "24 " <P;8 3+ 8
3 D 3+3 28 "44"@80 $PQ B24+2 3 Q<= +B24+
9+326 5" !8+8 Q0# B24+2 3 PP +B24+ 9+
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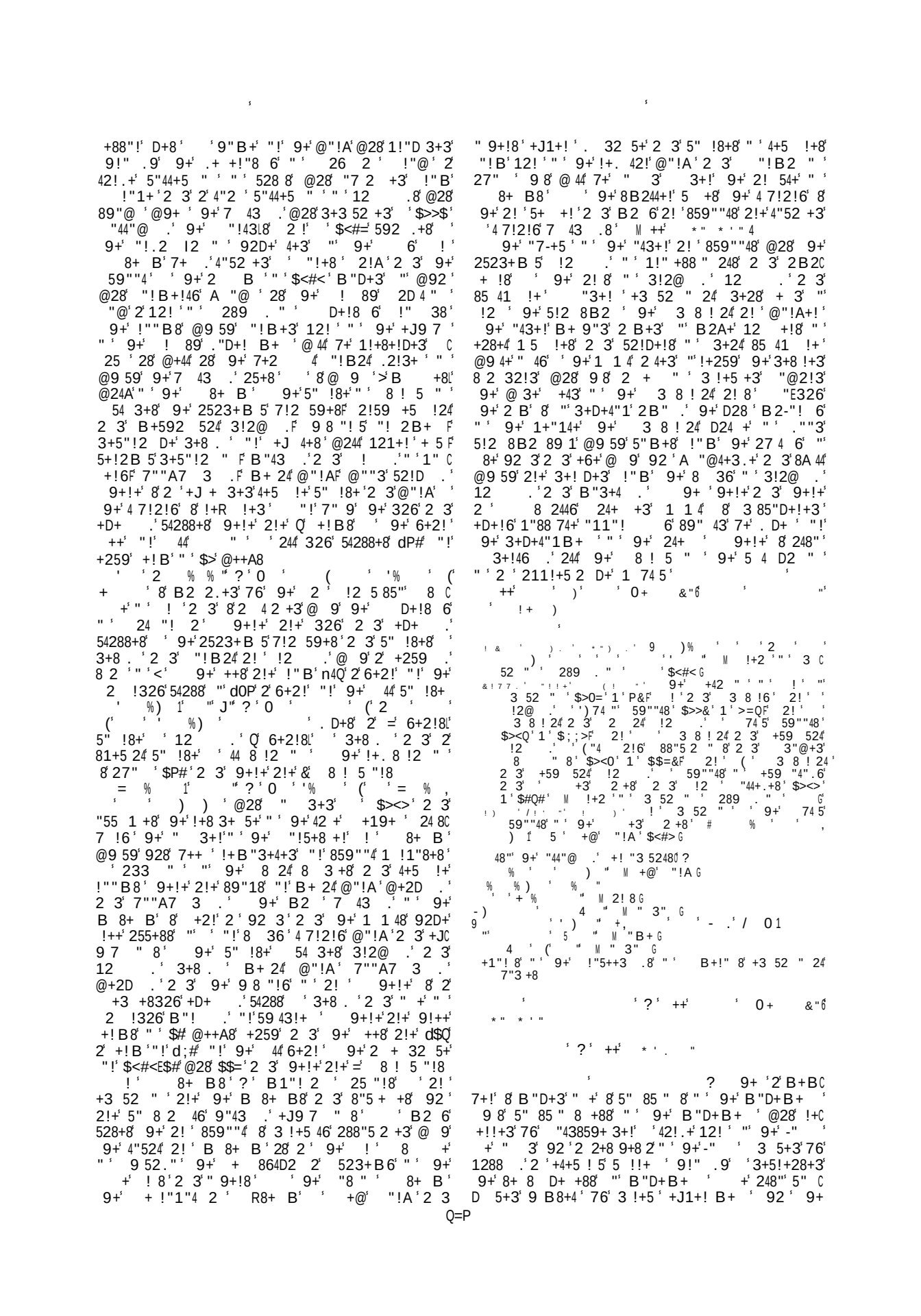

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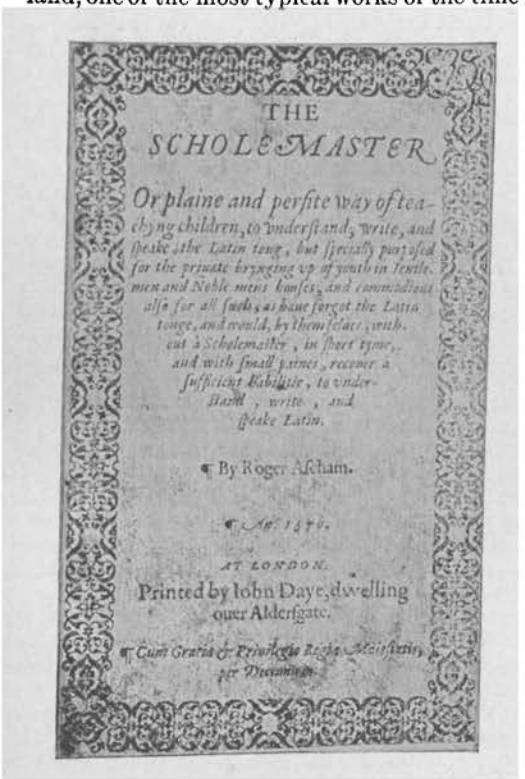
as he declares he could readily have done. The following educational ideas are advanced in the *Toxophilus:* shooting should be with the bow "fit" for scholars and students, as well as for princes and great men; youth ought to learn to sing, but not to get wrapt up in music; no man can "use" too much shooting; a protest against cards and dice; the importance of shooting as a recreation in training for possible use in war. He states as a fundamental principle that in learning anything (*e.g.* in shooting) a man "must covet to be best, or else he shall never attain to be mean."

The *Scholemaster* (1570) is Roger Ascham's great educational work. It is one of the most representative of Renaissance writings in England, one of the most typical works of the time in


THE
SCHOLEMASTER
Or plaine and perfite way of teachyng children, to vnderstand, write, and speake the Latin tong, but specially purposed for the priuate bryngyng up of youth in Ientlemen and Noble mens houses, and commodious also for all such, as haue forgot the Latin tonge, and would, by themselues, without a Schoolemaister, in short time, and with small paines, recouer a sufficient Habilitie, to vnderstand, write, and speake Latin.
By Roger Ascham.
AT LONDON.
Printed by Iohn Daye, dwelling ouer Aldersgate.
Cum Gratia & Priuilegio Regiæ Maiestatis per Decennium.

English literature and one still of real importance in its view of the early teaching of the classics. Its style is attractively quaint and spontaneous, and at the same time it is full of common sense as well as of learning. It gives a historical insight into the social conditions of the age, and combines both descriptive accounts of actual teaching and of suggested reforms. The running away from Eton College of several scholars for fear of a beating induces Ascham to write his book to plead for such gentleness in the schoolmaster as will inspire his pupils' love. Other points are the nature of quick and hard wits; of the limitations that should be placed on the choice of those selected for the higher learning. Ascham then proceeds to deal with the young gentlemen; the too great liberty to "live as they lust"; of their letting loose too soon to overmuch experience of ill; of the gathering of wit and fortune by the method of experience compared with the method of learning, showing that the school of *experience* is very costly; and lastly of the journeyings of young Englishmen into Catholic countries as very hazardous, and ordinarily attended with more harm than good.

Ascham is particularly well known by his double translation method of learning Latin. The steps are: (1) the master construes a passage to the pupil as often as the pupil needs; he also parses it over "perfectly"; the pupil then construes it orally, and is tested to see that he "doubteth in nothing"; (2) the pupil next translates the same passage, writing it out in a paper book. This the master examines, corrects, and returns. (3) After an interval of "an hour at the least," the pupil translates back his own corrected English rendering into Latin in a second paper book. Then the master is to compare the pupil's Latin with the original, and when the right words and true construction and learning of words are given, to say "Here ye do well." If the pupil has "missed" in, say, a passage of Cicero, let the master point out what Cicero would have done differently from the pupil's performance.

Thus exercised in the double translation from Latin to English, and from English to Latin, the pupil's observation is to be exercised to note, in a *third* paper book, synonymous terms, metaphors, phrases, and so on. Grammar is thus entirely subordinated to classical literature. Ascham interestingly discusses the contemporary methods of teaching by paraphrases, metaphrases, epitome, imitation, and declamation, and offers suggestions as to reading of authors. In the course of the *Scholemaster* passages of historical interest and literary style occur when he speaks of educational topics connected with Lady Jane Grey and Queen Elizabeth. Queen Elizabeth — in return — is reported to have said on hearing of Ascham's death that she "would rather have thrown ten thousand pounds into the sea than have lost her Ascham."

F. W.

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ASHLAND COLLEGE, ASHLAND, OHIO. — A coeducational institution founded in 1878 and incorporated in 1888 as the Ashland Uni-

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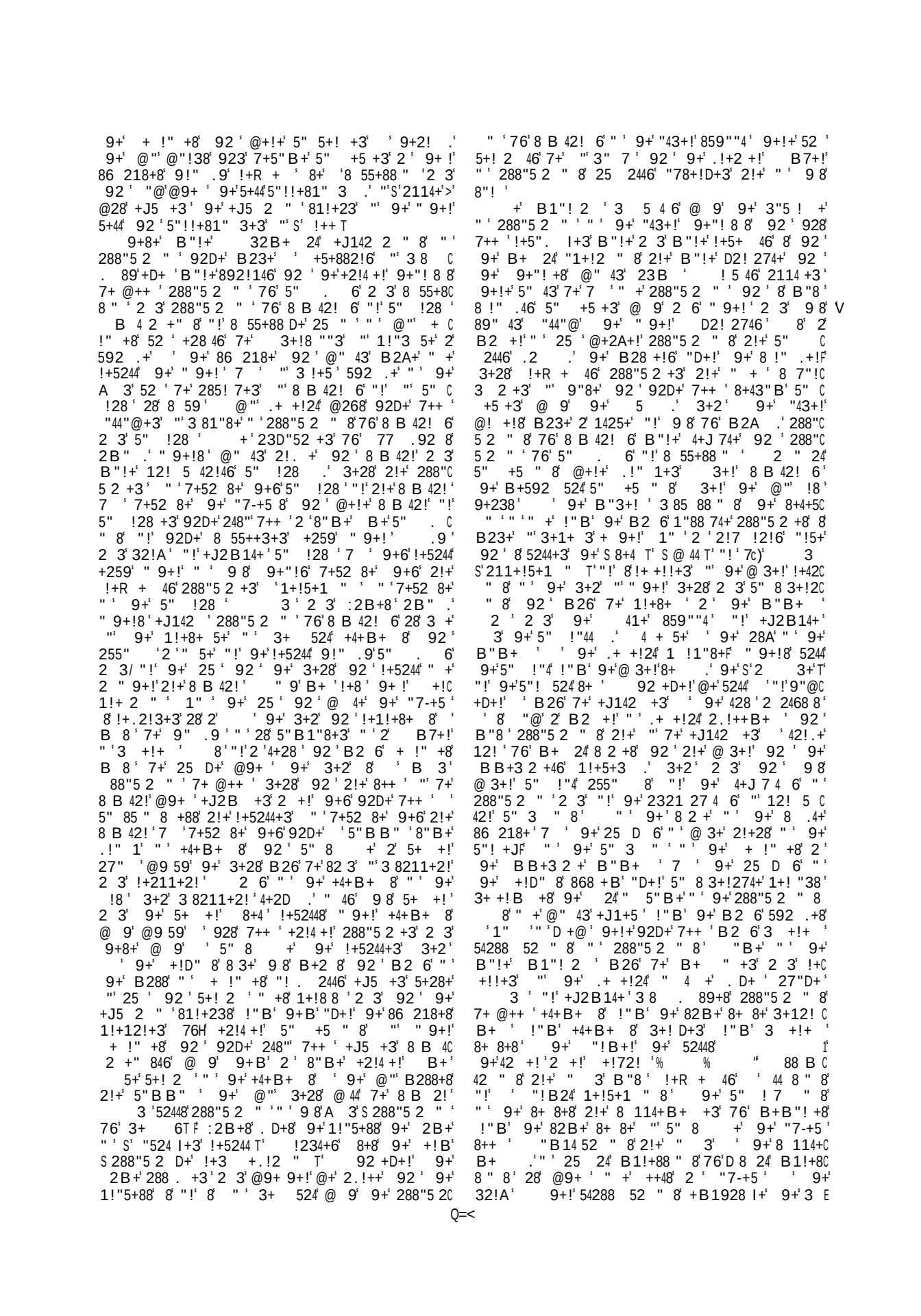

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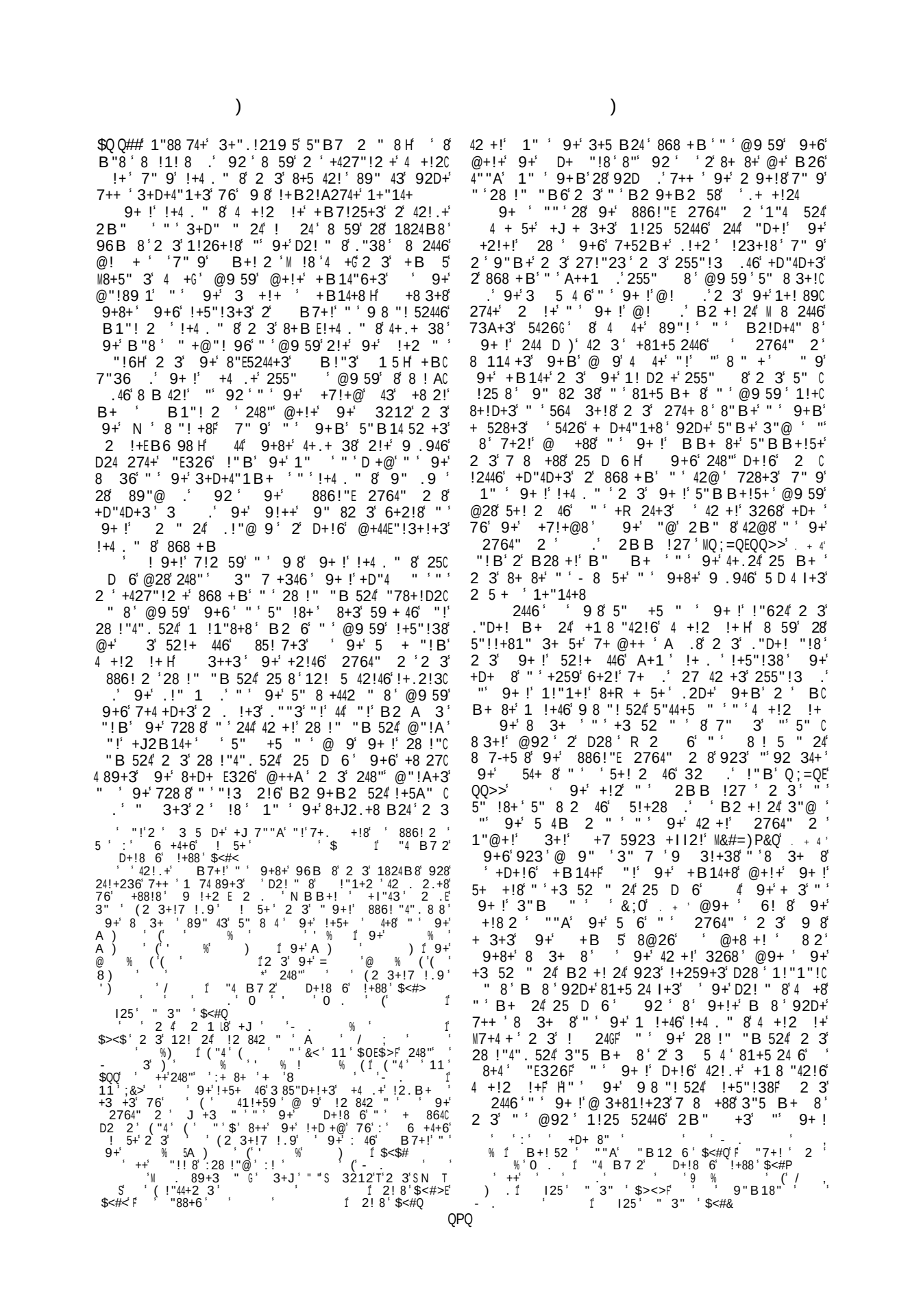

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' 89"! ' ' 8' 1+! +5 46' 54+2!' 92 ' 9+8+' 1+"14+' 12 3' +81+5 24 2 + " ' "' 9+' +3 52 " " ' 9+ !' 85! 724 "!' 4+2! +3' 54288 ' 7 ' ' 8' +R 2446' 1!"7274+' 92 ' +3 52 " ' @28' 4""A+3' 1" ' " ' 28' 2' D+!824 +5+88 6 ' ? ' 9 8' 928' +D+!' 7++ ' 9+' 528+' ' 9+' 28 ' ? ' 7 ' 28' 7+4" . .' "' 2' 12! 5 42!' 8+ ' " ' 81+5 24 8 8 ' @9"8+' 3 6' ' @28' "' B2 2 ' ' "!' 9+' @+4 2!+' " ' 9+' 2 " ' 28' 2' @9"4+' 9+!+' 8' " 9 .' "' 3 52 +' 92 ' 9 8' 85! 724 528 +' H @28' 3!2@ ' ' 42 +!' 3268' !"B' 2 6' 12! 5 42!' !25 24 "!' 2! 8 "5!2 5' 54288' "' 3" 7 ' 2 6' +44 .+ ' !++E7"! ' 423' @28' 1+!B +3' "' 3+3 52 +' 9 8' 24+ 8' "' 9 8' +5+8C 82!6' 7!2 59' " ' 9+' 2 " L8' 25 D 6' 2 3' "' 7+5"B+' + 9+!' 2' 5" 8+!D2 "!' "!' + ! 59+!' " ' 9+ !' 4 +!2 !+' !+4 . " 8' "!' 4+.24' "!' +48+' 2' 1 74 5' 255" 2 ' "!' 9+' B2 + 2 5+' " ' 9+ !' 5"B B+!5+' 46 ' +D+!6' 8 59' 85! 7+' @28' @ 9C " ' 3" 7 ' 2' B+B7+!' " ' 9+' 1! +8 46' "!3+!8' @9"' @+!+' 28' " !' "@ ' 334+' .+8 ' 9+' 5" 8+!D+!8' " ' 244 4+2! .' ' D+!6' 2 5 + ' 3268' 9"/)+D+!' ' 8++B8' 92 ' 9 8' 1! +8 46' 85! 724 54288' @28' 42!.+46' !+5! +3' !"B' 9+' 9243+2 8' 2' +B 5' !25+' A 3!+3' "' 9+' 2764" 2 8' @9"' 52B+' !8' !"B' 9+' " 9' 24" .' 9+' 5"28 ' " ' 9+' +!8 2 ' 4 ' 2 ' 2' D+!6

f ' (' 41!+59 ' 6 ' ' - . ' f 9 423+419 2' $<#;' 1' P;$ ' ' ' 9"B 18" ' (' ' % ' ' ' (' ' ' - . f ("48' ' ' I25' " 3" ' $<###F 0 ' + ' ' ' ' (' - . f ("48' ' ' I25' " 3" ' $<#0 ' '85! 724 528 +' '.+ +!24' 2 3' 12! 5 42!46' 2B" .' 9+' +7!+@8 ' 5 ' : ' 6 +4+6' ! 5+' ' 9+6 +!8' , % % ' - . % f " " S 5! 7+8' 2 3' 92! 8++8 T' 5"48' =;Q$E=;;Q

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9+ 8 33+ ! 8+ " 9+ 42 +! 2764" 2 +B1 !+ 3+! 9+ 9243+2 ! 4+ " +7 5923C +I12! 9+8" 27"1"42882! 9+ !8 " 9+ 42 +! 1 !+46 9243+2 36 28 6 + 3+3 1!"3 5+ 8" 9"!" .9 2 2B24.2B2 " " 9+ 9243+2 8 2 3 2764" 2 8 1!"1+! @9" 923 9+!+ " "!+ 1!"72746 7++ !25 2446 3 8 5 92 9+ 5" !8+ " B+ "1+!5+1 74+ 3 +!+ 5+8 +J 8 +3 7+ @++ 9+8+ @" +B 5 1+"14+8 9+ 2B+ S 9243+2 T 9"@+D+! 4 D+3 " 9+! !+8 ! 5 +3 8+ 8+! " 9+! 1! +8 46 +3 52 +3 528 + 2 3 "! 9 8 !+28" 9+ 243 923 8+ I+3 2 3 9+43 !"B B"8 2 5 + B+8 9+ !+. " " "43 B+! 8" 9+! 2764" 2 9+ +2!46 5+ +!" " 9+ " E +B 5 B+! 2 5 4 !+ 9 8 8 1+! "! 5D4I2 " 9+8+ 9243+2 8 23"1 +3 +D+ 2446 28 9+ !"@ 2 3 28 9+6 @+!+ 9+ 3"B 2 !25+ 9+ 1! +8 46 528 + " 92 !+. " 7+52B+ 2 9243+2 8 " 9+ 92 8" 9+! 2764" 2 9+ 9"B+ " 9+ "43 5 4 !+ 8 114 +3 2764" 2 3 " 9+! B1"! 2 5 +8 @ 9 1! +8 8 2 3 85! 7+8 @9" @+!+ 5"!!+5 46 +!B+3 S 9243+2 8 T !"B 9+ !"! . 24 3+85+ 2 2 2B+ 9"@+D+! @9 59 42 +! 3268 "@ . " 9+ 2B24.2B2 " " 9+ 9243+2 8 2 3 2764" 2 8 4"8 8 2 " 24 "!5+ 2 3 7+52B+ 2 3 8 5 D+ 211+442 " " 9+ 1! +8 46 528 + 8 !+2446 B2!D+4" 8 92 @+ 2!+ 274+ "E326 " "!B 42 + 28 B2 6 25 8 28 @+ 3" !+.2!3 . 9+2 5 + 886!"E 2764" 2 5D4C I2 " +!46 .7 ! +3 "!" "D+!" @" 9" C 82 3 6+2!8 7+ +2 9 9+ ! E9 448 " 2764" 2 2 3 88;!! 2 9+ !+5"!38 " 9 8 .!+2 5 4 !+ " 9+ 2 5 + 28 92D+ 5"B+ "4 .9 1!25C 5244 6 @ 9 " !" "@ B+8 2 3 92D+ . D+ 8 2 8 .9 " 8"B+ " 9+ B"8 B +3+ 2 48 " 9+ ! 1 74 5 1"4 6 2 3 +D+ " 9+ ! 32 46 4 + A+ 9+ D244+6 " 3!6 7" +8 B+ C " +3 76 9+ !"19+ I+A +4 M;0 0G 7+ "!+ 9+ 5!+2 D+ 7!+2 9 " B"3+! 888!! "4". 524 85 + 5+ 9+!+ 92D+ 2! 8+ S 2 "8+ 2 3 2 892A .2 3 9+ 7" +8 92D+ 5"B+ ".+ 9+! 7" + " 9 8 7" + T :

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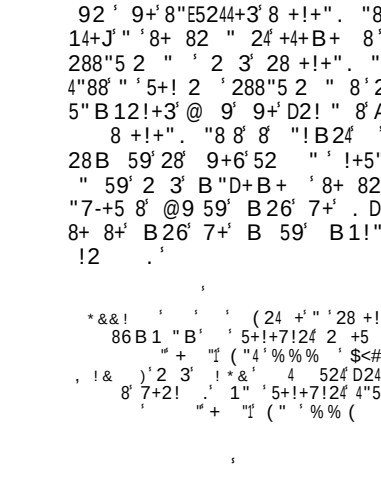
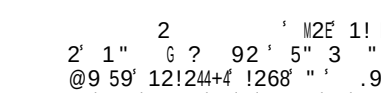
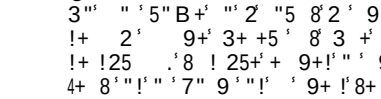
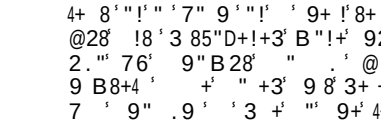
M$&&>E$0;$G ? ! +!" B 85+442 +" 8 "1 58 9+@28 9+ 32 .9 +!" 2 +@528 4+ B+!592 @9" .2D+ 9+! 2 52!+ 4 +3 52 " 9+ 27" Q# 89+ 8+ 4+3 " 3" @9+!+2 3 2 9+48+2 89+ 1288+3 9+ !+8 " 9+! 4 + 9+ 89+ @28 Q& 89+ 1 7C 4 89+3 2 " 6B" 846 2) $ I @9 59 89+ 23D 8+3 9+ +!+5 " 2 8"! " 9 !59 " .42 3 +!6 @ 9" D"@8 @9 59 !+4 . " 2 3 +3 52 " 89" 43 ." 92 3 92 3 $&<0 9+ 6+2! @9 59 + "+ 5"B142 +3 92 !8 8 +44 923 2 5C 12 +3 8"B+ " 9 8 3+28 89+ 1 74 89+3 2 8+5" 3 12!) D .2 B+ 9"3 "! 9+ B1!"D+B+ " 9+ B 38 " 9+ !+54 8+8 89"1 ! + 8 82 3 "92D+ 1+!8 23+3 8"B+ .!+2 4236 @9" 923 7++ 2A+ 76 9+859+B+ " "+ 3"@ 9+ 8 " 7+52 8+ 82D"!+3 "" B 59 " 1"1+!6 +2!842 +! 9+ 0 2 @"! 96 289 " 82 ! I+3 9+ 1!"1"824 2 3 8 +8 B274+ 2 9"! +! " 9+!" @! .8 1"4 524 2 3 +554+8 28 524 2!+ " 5" 8+R + 5+ B2 46 7+C 52 8+ 9+6 1!"D+ 9+! "92D+ 7++ 2 @"B2 " 5" 8 3+!274+ 25 + +88 @9" 3 3 " 9+8 2 + "+ .2.+ " +R 24 +!B8 @ 9 B+ 4A+ +!E 7 !6 2 3 :"9 "!! 8 " +B+! " +J5+1 " 89" 43 7+ B23+ 2D"! " 9+! + (% (2 ' 6 M$&<&G 2 3 ' (%) M$0##G 9+ "!B+! " @9 59 5" 2 8 " 2 4 4+ D ."!" 8 82 !+ 1" 9+ 8+J "" @9 59 9 8 .""3 2 3 274+ 7 8"B+@92 +55+ ! 5 4236 3 3 " 7+4" . !8 8 +44 8 " B 59 !+B+BC 7+!+3 7 2 52!+ 4 B" ".!219 3+24 .@ 9 9+!2 3 " 9+!@"B+ 9+! +!8 " 9+!326 " !8 4 I27+ 9 48 "7 9+ .4"E 2J 859"42! 8 B 59 "7+3+8 !+3 92D+ !+4 +3 " 2 " D+! " L8 2! 54+ 9+ 5 " 2!6 " 2 " 24 ".!2196 2442!3L8 (- I 2 3 B6 "@ " +8

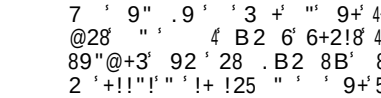
2 (? "88 " 8 +!+". "8 5 8+ 8+ MZG 8 9+ 27 4 6 "3+5 3+ !"B " 59 2 3 B " "! 8+ 82 " 8 9+ 2 !+ 2 3 8+ " "7-+5 8 @9+ 9+ +6+8 2!+ 54"8+3 2 1+ 5 4 "! 2 5" 7+ 1425+3 9+ 92 3 R 2 "!B24 1+!8" 9+!+ 2!+ "7 2 +3 8+ 82 " 8 " 92!3 +88 " +B1+!2 !+ 2 3 5"B14+J 1+!5+1 " 8 " ! 3E +8 " 4+) 9 + 5 @9 59 2!+ +!1!+ +3 76 9+ 3D3 24 "B+2 !+81+5 D+46 2 1+ 5 4 "! 2 5" 9+ 5" 3 " " 28 +!+". "8 8 9+ +!1!+ 2 " " 9+3 +!+ 8+ 82 " 8 8 " 1"88 74+ 24 9" .9 B2 6 " 9+ 8+ 8"!6 "!.2 8 B26 7+ 28 25 + 28 2 "!B24 3D3 24 9+

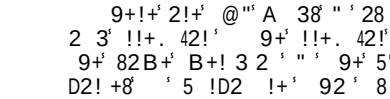


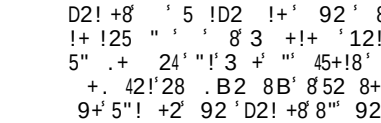


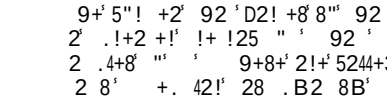


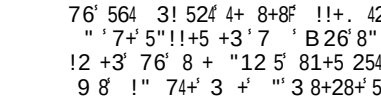


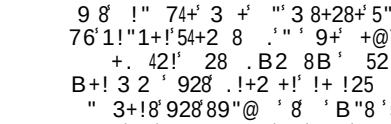


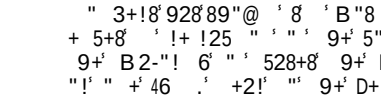


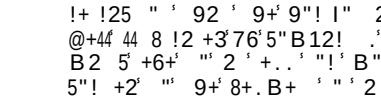


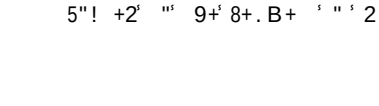












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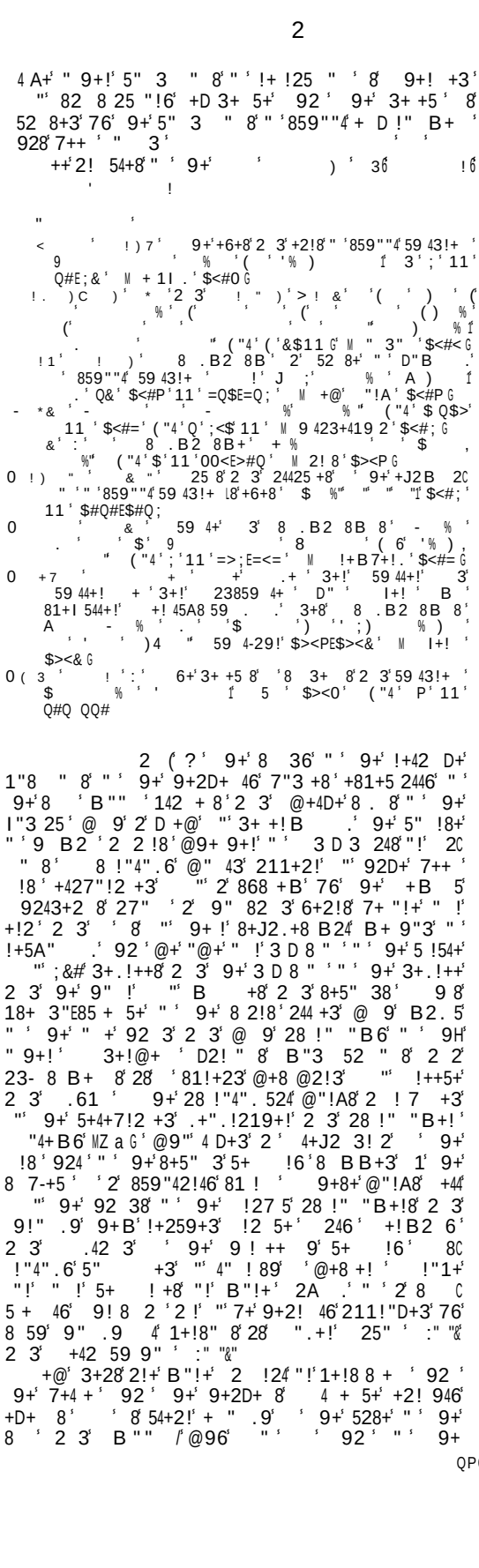

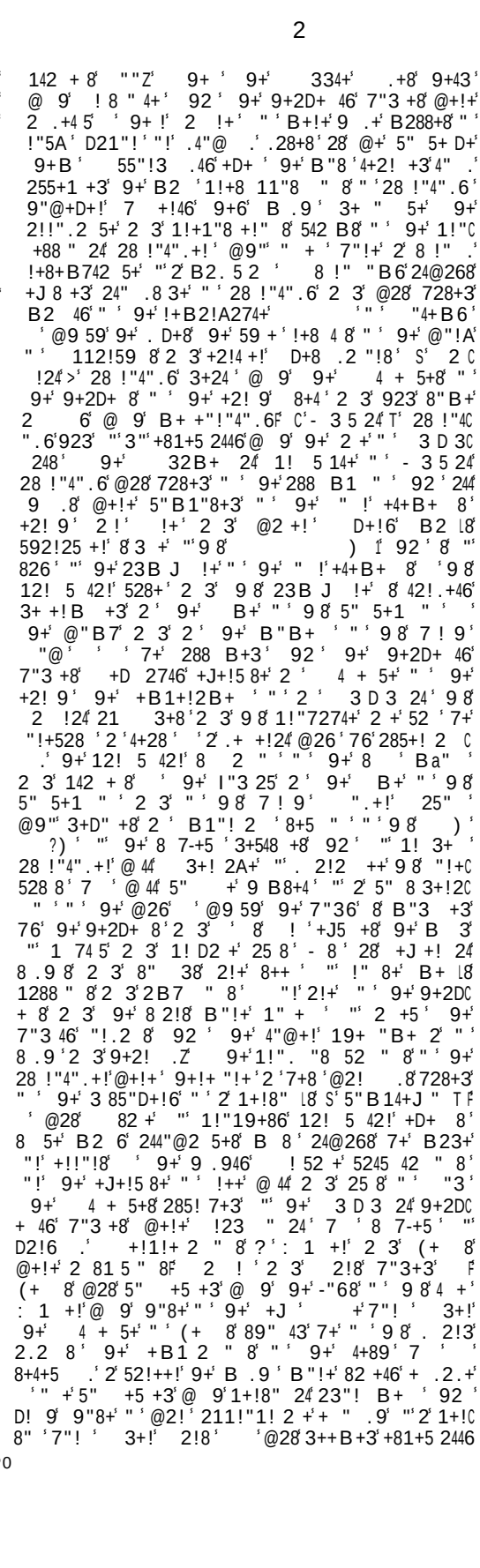

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K24@268 7++ A "@ " +D+!6 " +F 28 9" .9 59 43!+ @+!+ "@ 7"! @ 9 28 !" "B 5 A "@4E /+3.+ "!" @" 43 2 4+28 25R !+ 9+B 8+4D+8 28 9+6 4+2! " 5!++1 2 3 @24A " 2 4 C 2! 2 2.+ 28 !" "B6 8++B8 2 8"B+@92 @"! E " 8+4+88 85 + 5+ 928 7++ !+4+.2 +3 " 2 +@ 12.+8 859""47""A8 " .+".!2196 12.+8 92 2!+ 3" 7 4+88 " + " B +3 @9+ 9+ 7""A 8 8 3 +3 8 1!"72746 2 !+24 25 2 3 2 +!+8 .' + 92 9+ + !+ +3 52 +3 1 74 5 @28 " 5+ 8" @+44 D+!8+3 28 !" "B6 92 9+ 85 + 5+ @28 " 8 +3 !"B 9+ 5 !! 5 42 " 1!"C +88 " 24 +259+!8 9 43!+ 4+2! +3 !"B 9+ ! 12!+ 8 " 3" 7 28 . !48 4+2! 5""A . 2 3 " 9+! 3"B+8 5 255"B 14 89B+ 8 !"B 9+ ! B" 9+!8

9+ 4218+ " .+ +!2 " 8 928 8++ 9 8 A 3 " A "@4+3.+ 1288 " 9+ !+. " " 9+ "!." + !"72746 ! +"!.+ !6 @28 !.9 9+ !+B2!A 2 ! 7 +3 " 9 B 92 " "B"!+ 92 " +B2 2 9" 82 3 A "@8 92 9+ 8 2!8 ! 8+ 2 3 8+ 4 A+ 9+ 8 2 3 B"" 4+2! +3 1!" +88"! M " " 28 !" "B6 " 5+ 28A+3 9+ @! +!' @9+ 9+! 9+ B"" 1288+8 9!" .9 9+ 1928+8 " 44 B"" -' +@ B"" + 5 244 12! 8 " 9+ +2! 9 28 3 3 9+ !+. " @9+!+ 9+ 4 D+3

8 !" "B6 "!B+3 " +' " 9+ 8 7 +5 8 " 8 36 54 3+3 3+! 9+ :)) :" "&1 2 3 @28 8 246 288"5 2 +3 @ 9 B2 9+B2 58 9+ + 3+ 56 +D+ 7+6" 3 9+ 1+! "3 " 9+ .!+2 28 !" "B+!8 @28 " 126 B"!+ 2 + " " 9+ 2 5 4 2 3 28 !"4". 524 9 8 @28 "8C +!+3 248" 76 9+ 4 + 5+ " 9+ !27 5 2 3 +7!+@ @! +!8 @9 59 52B+ 9!" .9 12 9+ D+!8 +8 9+ 8 7-+5 " 28 !" "B6 @28 24B "8 244 528+8 2 .9 76 2 1!" +88"! " B2 9+B2 58 9+ .!+2 28 !" "B+!8 659" !29+ 4+5 !+3 2 9+ D+!8 6 " "1+ 92.+ $P0=F 24 4+" 24 4+ @28 !8 1!" +88"! " B2 9+B2 58 2 3 28 !" "B6 2 82 !"B $P>< " $P<Q 7 3 3 " B++ @ 9 8" B 59 8 55+88 28 2 23 2 @9+!+ 9+ 4+5 !+3 " 5!"@3+3 54288+8 "! @+4D+ 6+2!8F +14+!@28 2 !25 +3 " 28 !" "B6 !"B 9+"4".6 76 2) 1"! 6 @9 59 1!+8+ +3 8+4 " 2 2-GE 1" B+ 28 4+5 !+! " B2 9+B2 58 2 3 28 !" "B6 2 !2 I $P<= 7 8" 4 4+ 1"1 C 42! 6 3 3 9+8+ 8 7-+5 8 + -"6 92 9+ @28 5" BC 1+44+3 " 44 1 9 8 B+ 76 . D .' 8 ! 5 " " 9+! 7!2 59+8 9+ "11"8 " " 9+ 9 !59 2 3 9+ !23 524 D +@8 " 9+ 4+23+!8 9+ +43 5""1+!2 +3 + +5 D+46 " 1!+D+ 2 6 592 .+ 9+ 5" + " 28 !" "B6 8" 92 +D+ 28 42 + 28 9+ 7+. .8 " 9+ 8+D+ ++ 9 5+ !6 "4+B 6 8 2 3 0 % $) 5" +3 " 7+ 8+3 28 " 5 24 +J 7""A8 9+ +8 274 89B+ " 9+ 2D 4 2 !" +88"!89 1 " 8 !" "B6 2 J "!3 $&$<1 2 + 3 " 9+ "43 868 +B !+R + 46 9 8 " 5+ @28 5" BC 7 +3 @ 9 92 " " "624 8 !" "B+!2 9+ !++ @ 59 78+!D2 "!6 +@ " 8 .!+2 5" C ! 7 " 8 2 2B 7! 3.3 @+!+ B23+ 28 528 2 !" +88"!" 2 9+B2 58 9+ 592 ! 28 !" C "B6 2 3 +J1+! B+ 24 19 4"8"196 2 2B E

7! 3.+ @28 " 8 +3 4 $0#=F $0=< 2 " 9+!592 ! 28 !" "B62 3 .+"B+ !6 @28 " 3+3 428."@ D+!8 6 9+592 ! 28 !" "B6 ".+ 9+!@ 9 2 "78+!D2 "!6 @28 +8 274 89+3 $0&#F 2 74 $00=F 2 3 2 3 7 !.9 $0>& 8 2.+ +!24! 4+28 !" "B 52488 3 +8 2!+ 2A+ 1 76 23D2 5+3 8 3+ 8 B2 9+B2 58 2 3 1968 58 428."@ 9+ 8 7-+5 B26 7+ " +!+3 "! 7" 9 "!3 2!6 2 3 9" "!8 3+.!++8 9+ +@+! D+!8 +8 92D+ "28 6+ 8 +3 8+12!2 + 592 !8 28 !" "B 6F 9+8 7-+5 8 288"5 2 +3 8 2446@ 9 9+ 3+12! B+ " 1968 58 +!B2 6 2 9+7+. ." 9+428 5+ !6 .+ +!24 5" !8+8 @+!+ " +!+3 9+ D+!8 +8 28 !" "B6 28 2 5 4 !24 8 7-+5 1!+8+ 9+8 7-+5 8 8 2446 288"5 2 +3@ 9 9+1!" +88"!89 18 B2 9+B2 58 +@" 9+ B2 6 D+!8 +8 92D+ 2 8+12!2 + 3+12! B+ 28 !" "B6F 8+D+!24 9+8 7-+5 8 " !+1!+ 8+ +3 76 2 1!" +88"! 2!7 !. 28 !" "B6 8 288"5 2 +3 @ 9 1968 58 2 6" 9+ D+!8 +8 2!+ ! 89+3 @ 9 "78+!D2 "! +8 @9 59 9"@+D+! 9!" .9425A" B+2 8 2!+ " 8"@+44 +R 11+3 28 9+ .4 89 2 3 B+! 52 9+ +3 2 +8 9+85 + 5+ "!B+3 2 8 7-+5 " 9+5"44+.+5 !! 5 4 B !"B 2 +2!46 32 + 8 B+ " +3 ! 2 2) M$&=;G 28 7+ .8 3 +3 2 2!D2!3 9+ 9 !3 6+2!" 9+5" !8+ 9+ 9+5" !8+ 2 2!D2!3 @28 4+ . 9+ +3 " 6+2!8 28 !" "B6 @28 1 9+5 " ! 9 6+2!F 8" 9+5 2!C D2!3 2!59 D+8 2 B2 85! 1 32 +3 $&<# !+ +! 9+ 8+ " 288+ 3 8L9) % 1 2 +J 7""A @9 59 923 2 4" ." D". + 2 3 8 B+ " +3 2.2 9+ 3 2!6 " !+8 3+ 238@"! 9 M$OQPE$0;&G 28 7+ ." 8+3 76 9+ + "! "19 8 +!8 6 $0=Q 9+ +J 7""A 211+2!8 "7+ 2 8L 1 @9 59 8 248" B+ " +3 2 4+ +! " :"8+19 9 11+ @9" @28 2 8 3+ 2 ! 5+ " M$OP#G $0&# 8 D" +3 2 2!D2!3 S 92 9+ 92 A8 " 9 8 5"!1"!2 " 7+. D+ " 9+ " :2B+8 "@3" "! 9 8 .+ +!" 8 3" 2 " " 2 "!!+!6 9+ 2112!2 8 " 2!D2!3 "44+.+ T F 2 3 2 +J1+3 @28 8+ " +@ " 342 3 "78+!D+)+ !2 8 " (+ 8 $0>> @28 D" +3 92 S ! +77+! 7+ 3+8 !+3 . D+ 9+ + "! 4288 2 +! "B B+ 5+B+ 8 59 2 5" !8+ " 28 !" "B 524 4+5 !+8 28 9"8+ " 92 8 2 3 . 92D+ 7++ 8+3 "2 + 3 9+ 244 " 9+ 6+2! "! 8+D+!24 6+2!8 128 T 3 9+ 82B+ 6+2! @28 D" +3 92 S 9+ "44 8 !" +88"! " 2 9+B2 58 89244 52!!6 9+ " ! 54288+8 "!C @2!3 76 1! D2 + 4+5 !+8 9+ 2 9+B2 58 9+ "44"@ ."!3+! 5" 5 8+5 " 28 2! 28 89244 7+ +5+882!6 "! 9+ 3+!8 2 3 " 9"8+12! 8 " 2 !24 9 4"8"196 2 3 8 !" "B6 @9+!+ 9+8+ 8+5 " 8 2!+ 2114 +3 819+! 5 +"B+ !6 2 3 ! ." "B+ !6 @ 9 9+ 2114 52 " " 9+ 8"4 " 8 !" "B 524 !"74+B8 + 5 92 7+ !+5"B B+ 3+3 9+ !" +88"! 9 8 1 74 5 4+5 !+8 @9 59 9+ 89244 3+4 D+!" 5+ 2 @++A D I " +3 +83268 2 @" "L54"5A 9+ 2 +! "" 28 928 7++

5 8 "B2!6 "7+ 28 868 +B2 5 28 B26 7+ 2 3 "+ 3+2D"! "." 9!" .9 2 !+. 42! 5" !8+ " 9+ 9+"!6" 2 !24 9 4"8"196 2 3 8 !" "B6 " !6+2!8 9 8 868 +B2 5 1 !8 89244 "1!+D+ 9+ !" +88"!L8 +!+8 . 4+5 !+8 1" 2 6 B1"! 2 19+ "B+ 2 92 B26 ! 1 9" .9 9+6 B26 "! 2 89"! +!B +!! 1 9+ .+ +!)5" !8+ +! 89244 3+! "42! 8 !" "B6 12! 5 42!46 +J142 9+ !+5+88 " " 9+ R "J+8 9+ 2 " "" 9+ 2! 9L8 J 8 2 3 9+ B" " "" 9+ 1".++ ?" 3+! 2! 8 !" "B6 9+ "" L8 7!2 " 2 3 9+ B" " "" 9+! 1".++ 2 3 "3+8F 2 3 3+! 863+!+24 8 !" "B6 9+ 7+!!2 " " " .9 T $0<$ 28 !" "B6 @28 54 3+3 2B" .9+8 7-+5 8 " +J2B 2C " 2 3 $0<& +!. 8" L8 8 B+ " +3 9+8 7-+5 @28 2 .9 76 9+ 1!" +88"! "! "! B2 9+B2 58 2 3 2 !24 19 4"8"196 2 3 9+ B2 9+B2 524 28 !" "B6 @28 +B1928 I+3 9+ " 46 2112!2 8 8+3 @28 2 "!!+!6 9+5" !8+2 2!D2!3 8 61 524 " 9+ " 9+! D+!8 +8 2 92 B+ 24+ S 2 !24 19 4"8"196 28 !" "B6 2 3 " 9+! 12! 8 " B2 9+B2 58 T @+!+ 2 .9 9+ 9 !3 6+2! 9+ 3268 " +5 "! 44 2B8 00 2 1!" +88"!89 1 " B2 9+B2 58 2 3 2 !24 19 4"8"196 @28 +8 274 89+3 2 3 8 8 2 +3 76 9 8 8" 92 ! @ .9 52!! +3 9 8 B2 9+B2 524 54288 S 28 2! 28 2 6 " 9+B 5" 43 ." $ % " +@ " T 233 C " " 288+ 3 8L 9+ +J 7""A8 " +9+B 29 !" . 9 &2 3 " + -2B E 2! $ - % 1 ! (! $ 1 1 7 ! & 9+23D+! 8+B+ " L8 "44+.+ M "@ "4 B7 2 D+!8 6G 8 B+ " +3 92 C 8 9+3+8 . " 9+ "44+.+ 8 ! 5 2 3 1+! +5 6" 9 A "@4+3.+ " 244 2 !+ 9+ +2D+ 8 27"D+ 8 2 3 9+ ! T M$OP=G 3 $OPP 9+ 2@8 2 3 !3+!8 54 3+ B2 9+B2 58 2 3 B2 9+B2 524 2 3 +J1+! B+ 24 19 4"8"196 $0>= 9+!+ @28 211 +3 2 !" +88"! " 2 !24 9 4"8"196 2 3 8 !" "B6 @9" $0>< 4+5 !+3 " 5+ 2 326 " 28 !" "B6 ! 5+ " 28 !" "B6 @28 +D 3+ 46 2 .9 $OP# @ 9 9+ 2 3 " +J 7""A8 M 2! L8 2 3 2 L8G 2 3 2 "!!+!6 5" 8 ! 5 +3 76 2D 3 + 9" 8+ @9" 9 B8+4 923 " + " 9+ +2!4 +8 1! D2 + "78+!D2 "! +8 B+! 52 8 !" "B6 5" +3 " 7+ 9+ 23- 5 " 9+ 1!" +88"! " B2 9+B2 58 "! 2 !24 19 4"8"196 "! 7" 9 4 9+ 428 5+ !6 1!" +88"! " 28 !" "B6 211+2!8 " 92D+ 7++ 211" +3 2 2!D2!3 $>QP 78+!D2 "!6 @"!A @28 2 B2 +!" 84"@ 3+D+4"1B+ 25A " 38 2 3 "11"8 " !"B 9"8+ @9" 3 3 " 3+!8 2 3 9+ ++38 " 8 59 2 8 " "! 8 81+5 +3 8 8+8 1!+D+ +3 2 6 1!".!+88 9+ + .9 ++ 9 5+ !6 2 +B1 @28 B23+ 2 2!D2!3 $>$& 9!" .9:"9 2!!2! "44 8 !" +88"! 2 9+B2 58 2 3 2 !24 9 4"8"196)

9 .9 859""48 2 3 5"44+.+8 92D+ 1!" +88"!8 " B2 9+B2 58 2 3 1968 58 " 46 9+42!.+ 8 " B2 2 8+12!2 + 1!" +88"!89 18 " 28 !" "B6 9+!+ "!+ .!23 2 + 8 3+ 8 @9"" 92D+ 2 54 2 " "! +J25 85 + 5+ 2A+ 9+ ! 23D2 5+3 @"!A B2 9+B2 58 2 3 1968 58 " !+R + 46 9+6 3 23D 8274+ 2 9 !3 5" !8+ 9+9 8 "!6 "! 9+"!6 +3 52 " 5+4+8 24 B+592 58 24@268 +J "44+3 28 9+ 7!2 59 "4+2! .1 @9 59 92D+7++ 259 +D+3 9+9 .9+8 ! B198 " 9+9 B2 +44+5 8 "@/ +.4+5 +3 24B "8 " 2446 76 .!23 2 + 8 3+ 8 3"+8 " 211+2! 92 742B+2 259+8 "2 6" + "! 9 8 8 2 +" 2 2 !8 28 8 9+528+ 9+ +.4+5 " +4+B+ 2!6 8 ! 5 " 9+ !+ 3 " +D+ 8 928 7!" .9 9 8 !+8 4 !!+8 8 746 28 928 B2 6 " 9+! !+8 4 8 "!+8++ 2 .+ +!2 " "! @" 9+128

233 " " 9+ D+!6 23D2 5+3 5" !8+8 4+23 . " 9+ 9 3+.!++ B"8 D+!8 +8 !"1+2 3 B+! 52 " +! 248" 5+! 2 +!C B+3 2 + 5" !8+8 @9 59 2!+ 2 + 3+3 +259 6+2! 76 2 D+!6 +@ 8 3+ 8 9+42!.+ 8 " 8 + " 9+8+ 5" !8+8 8 24@268 1!25 524 C 3+ 8 2!+ 8 ! 5 +3 9+ 8+ " 9+ 8+J 2 !2 8 2 3 " 9+! 28 !" "B 524 8 ! B+ 8 9+6 B2A+ 9+ ! "@ "78+!D2 " 8 2 3 52!!6 " 9+ +5+882!6 5245 42 " 8 3+! 3 !+5 " 9+ " 9+! 8"B+@92 23D2 5+3 5" !8+ 8 2446 3+248 @ 9 5"B+ "!7 5245 42 " 8 8 B"!+ "! 4+88 !"3 5 "!6 " 5+4+8 24 B+592 58 2 3 8+43"B 928 B"!+ 92 @" "! 9!++8 C 3+ 8 2446 " +"!" @" D+!8 +8 " +! 1!25 524 5" !8+8 28 !"1968 58 9+ @"!A 7+ .3" + 9+ "78+!D2 "! +8 2 3 !+R !C .+J !+B+46 +427"!2 + 2 3 5"8 46 8 ! C B+ 24 +R 1B+

9+ @9"4+ @+ B26 8 B 1 9+ 1!+8+ +3 52 " 24 " 4""A 28 !" "B6 R +"1 C B 8 52446 D+! 8 8 + 5+ 1" 427"!2 "!6 @"!A @ 5+28+ 2 3 @ 44 7+ !+1425+3 76 8 36 85 + 5+ 28 2 12! " B"3+! 5 4 !+ X 9+ 92 "55 !8 28 !" "B6 @ 44 5"B+ " 8 "@ 2.2 8"" 2!" 28 +4+B+ 2!6 8 ! 5 " 8 5" C 5+! +3 9 8 @ 44 7+ + 7" 9 9+ +259+!2 3 9+8 3+ F 7" 9 @ 44 7+ 7+ +!+ B+ 7+52 8+ 9+ B B+3 2 + !+ " 23D2 5+3 8 ! 5 " 52 " 7+ "!+8++ F @ 44 3+1+ 3 " 9+ B1+ 8 2 3 3 !+5 " . D+ " 9 B2 9" .9 76 9"8+ +@ B+ " . + 8 @9" 89244 4 D+3 ! . 9+ +J . + +!2 " :

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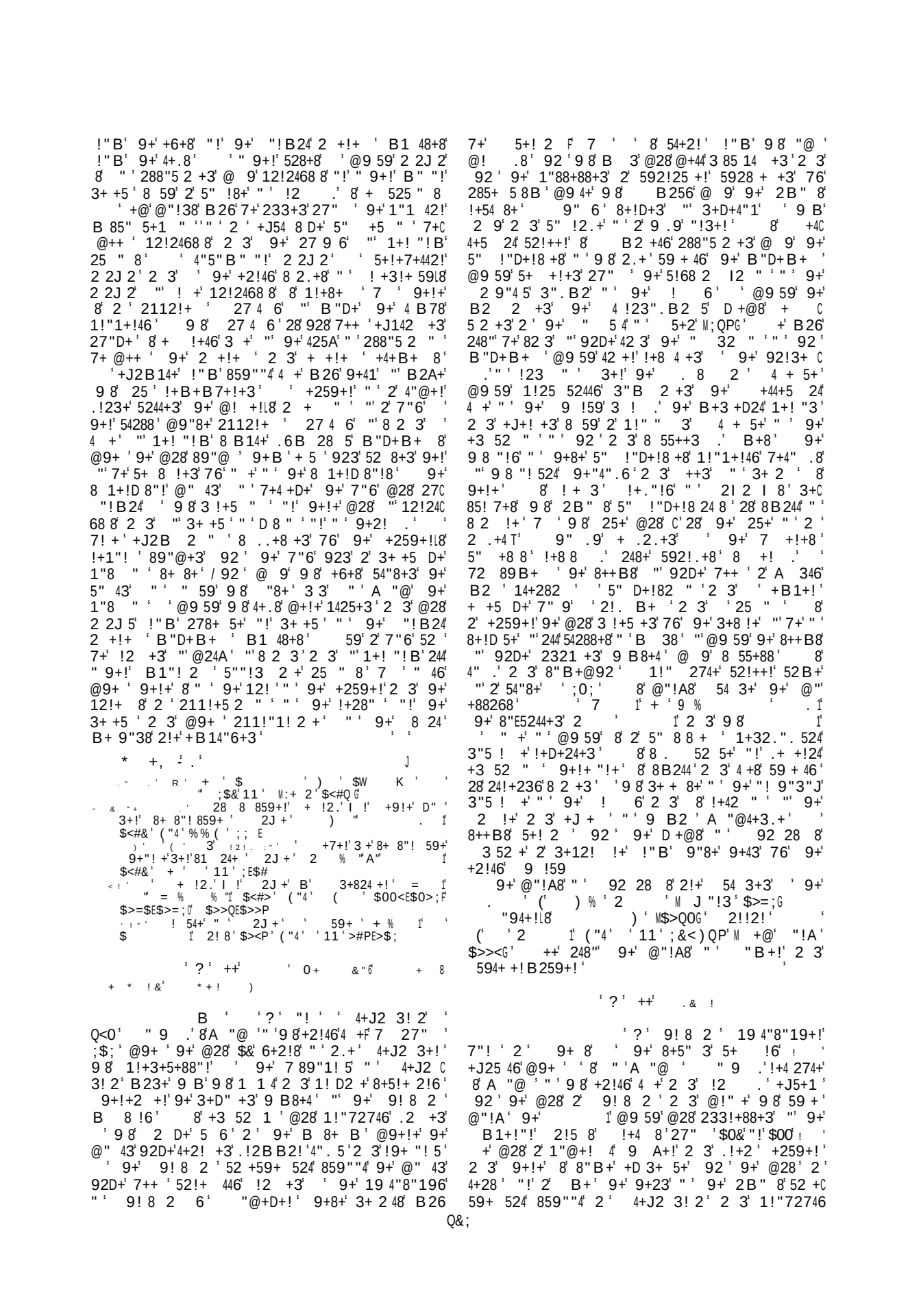
"B"8 !+23+!8 8 +5+882!6 "1" 9+ 2 2J 5 5" 3 " 6" .59 43!+ @9 59 2 7 ! 9 8 24B"8 5"B14+ + 2 3 @9 59 1+!8 8 8 "! B2 6 " 9+ B"8 B1"! 2 9 B2 25 D +8 +D+ "! 9!++ "! " !6+2!8 9 8 5" +5C " @"A 38 " 5""!59 2 +3 B"D+B+ 8 ++3 7 7+ B+ " +3 @24A ." 2 3 D"524 81++59 " 9+!25 D +8 2 "!B) 5""!3 2 " "! 2 2J 2 B26 7+ " +3 +D+ 23 4 8 9+ !+23+! ++3 7 5244 "B 3 "! "78+!D+ 9+ 2@A@2!3 2 3 8+4+88 B" " 8 " B"8 B+ @9+ 9+6 8+@F 9+ 72346 3 !+5 +3 1+5 4 2! B"D+B+ 8 " 2 @"B2 @9+ 89+ 9!"@8 2 7244F 9+ 54 B86 8A 44 4 25 D 6 " 9+ 23 4 4+2! ." 32 5+F 2 3 9+ 427"! " 8 B"D+B+ 8 " " +4+2! ." 8@ B 9+ +3 52 " 1!"5+88 7+. 8 """ 42 + 4 + 5+!C 2 B"D+B+ 8 B26 +D+! 7+5"B+ 8"" @+44 5""!3 2 +3 92 9+ 25 D 6 8 +28 46 2 3 @+44 1+! "!B+3

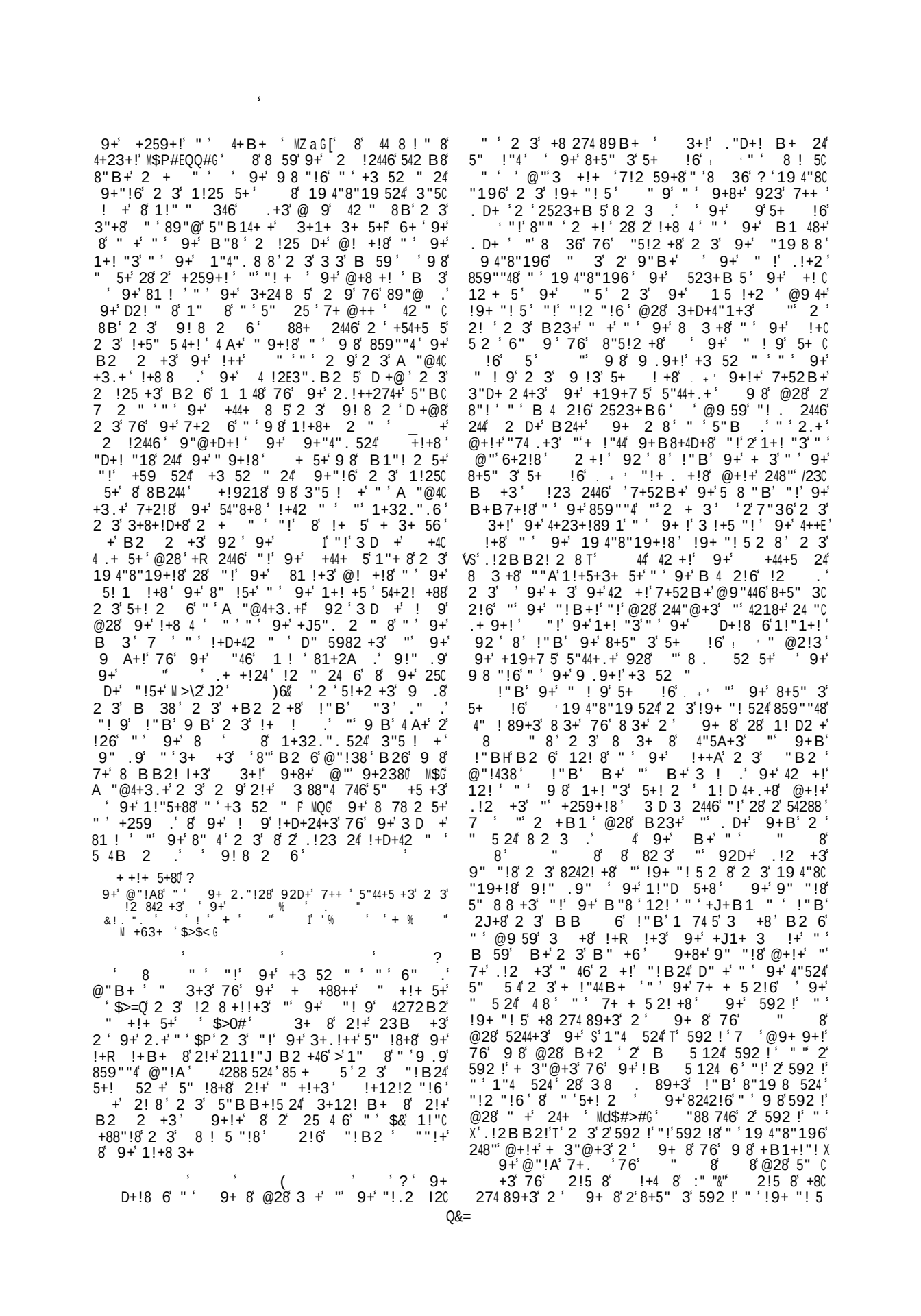
9+27 4 6 "5""!3 2 +B"D+B+ 8 211+2!8 "92D+ 2 3 !+5 !+42 " @ 9 9+ 27 4 6 " 9+ 4"@+! 5+ +!8 # "" 9"8+ 7+4"@ 9+ 5+!+7!24 5"! +JG "288 B+5" !"4 " 9+8+ B"D+B+ 8 7 9+5" 3 " " 2 2J 2 B26 7+ 9+ !+8 4 " - !6 3 8+28+ "!3+8 ! 5 " " 2 6 12! " 9+2 +!+ 868 +B 92 8 8+3 5""!3 2 " 8 A "@ 92 4+8 " 8 "! 5 " 24 24 +!2C " 8 " 9+ 1+! 19+!24 +!D+8 " 9+ 81 24 5"!3 2 3 B+3 442 "74" .2 2 " 9+5+!+7! B 2 3 " 9+ 5+!+7! B B26 1!"3 5+ 2 2J 2 1!"D 3+3 9+ 211!"1! 2 + 2 +!+ +4+B+ 8 2!+ D"4D+3

5"B B" 2 2J 5 +J1+! + 5+ 3 + "2 5C " 24 3+!2 .+B+ 8 92 +J1+! + 5+3 9+ 4+.@9+ 92 B+B7+!S ."+8 "84++1 T 9+ 5" 3 " 1+!8 8 8 "! " 46 2 89"! B+ 7 @ 9 9+ +J5+1 " " 5!2B1 "!" 12!8+8 9+8 2 M1+5 4 2! 8 7-+5 D+ 8+ 82 " 8 " .4 .2 3 9+2D +88G L 8 592!25 +! 8 5 " B"8 2 2J 5 8 2 +8 5!2B1 8 " 1!+8+ 244 A 38 " B"D+B+ 2!+ 1"88 74+F 9+ 3 D 3 24 B26 8 2 3 "! @24A "! +D+ 32 5+ 7 9+8+ B"D+C B+ 8 2!+ 2@A@2!3 2 3 7" 9 "7-+5 D+46 2 3 8 7C -+5 D+46 2112!+ 46 5" !"44+3 9+ 4+. B26 7+ 3!2. .+3 9+ "" B26 7+ 4 +3 "" 9 .9 "!1 3"@ "" V"!5 746 8 59 2 5" 3 " 9+ 81 24 5"!3 "! 9+ 7!2 "! 7" 9 3" " !+5+ D+ 9+ 1!"1+!2 +!+ B1 48+8 2 3 9+ 3 D 3 24 "! 9 8 7!2 "! 9 8 81 24 5"!3 3"+8 " 7+5" B+ 2@2!+ " 9+ 1"8 " 7 B7

45"9"4 5 4 R "!8 1!"3 5+ 2 2 2J 2 @9+ 2A+ 8 5 + R 2 +8 9+!+ 8 2 8 2. .+! . .2 2 2 8 B74 . 2 3 9+8 2 . 81++59 B74 . " 9+ 92 38 2 3 2 3 5 4 6 9+ 1+! "!B2 5+ " 244 B"D+B+ 8 !+R ! . +23- 8 B+ 8 59 2 5" 3 " 8+ 8"!6 3+ 5 + 5 +8 52 7+ 3+B" 8 !2 +3 2 3 @9+ 9+ 2B" " 9+ .+8 +3 245"9"4 8 D+!6 42!. + 2 5" B14+ + 2 2+8 9+8 2 B26 !+8 4

9+ 8@26 " 9+ 7"36 9+ 8 2. .+! 9+ 84"@ 9+8 2 . 84 !! . 2 3 - B74+3 81++59 " 9+ 3! A2!3 2!+ 12!244+4+3 76 8 B 42! 8 2 +8 3 + "! "!.2 5 +!D" 8 3 8+28+ " !25+274+ "5 245"9"4 9+8+ 86B1 "B8 2!+ " 3 4"5"B "C "!2 2J 2 # . & 9 8 3 8+28+ 9+!+ 8 2 3+.+ +!2 " "! 3+8 ! 5 " " 9+ 1"8 +! "! +!D+!"" 8 2 3 5"4 B 8 " 9+ 81 24 5"!3 2 3 9+ 2 +!+ B1 48+8 92 "!B2446 !2D+!8+ 9+8+ 12 98 52 "!+259 9+ !!+81+5 D+5+ +!8 8 B 42! 5"B7 2 " "55 !8 9+ 3 8+28+8 A "@ 28 S 5"B7 +3 854+!"8 8 T 2 3 S ! +3C !+ 59L8 2 2J 2 T 24 9" .9 7" 9 3 8+28+8 9+!+ B26 7+ D"4D+3 9+ + +!+ 12 98 28 @+44 28 9+ 2 +!+ "B+ 528+8 92D+ 7++ "78+!D+3 @9 59 2 2J 2 8 3 + "3+ +5 D+ 3+D+4"1B+ " 9+ 5+!+7+44 B 2 3 3 8+28+ " 9 8 "!.2 23 4 8 1!"3 5+8 2 8 B 42! 5" 3 " 8 2446 " 5+274+ " 46 @9+ 9+ 3 D 3 24 8 9+ 1! .9 1"8 " B26 248"" 7+ B+ C " +3 92 42B B2 " " 2 3 9+B"!!92.+ "" 9+ +! 24 +2!' 1!"3 5+ 2 8 2. .+! .2 288"5 2 +3 @ 9 D+! ." 44 9+ 86B1 "B8 9+8+ "!.2 5 3 8+28+8 B26 7+ 8 B 42 +3 + !28 9+ 2 #:" "& 2 3 968 +! 2 #:" "& "5"C B" "! 2 2J 2 2 3 5"B7 +3 854+!"8 8 2!+ 24B"8 +J54 8 D+46 3 8+28+8 " 23 4 4 + @9 4+ !+3C !+ 59L8 2 2J 2 2 3 9+ 2 2J 2 " 2! + M3 + "3+ +5 D+ 3+D+4"1B+ " " 9+ 5+!+7+44 BG 2!+ 5" .+ 24 9+ 2 2J 28 3 + " +! 24 2 3 B 334+ +2!' 3 8+28+8 2 3 9"8+ 288"5 2 +3 @ 9 + !28 9+ 2 2 3 968 +! 2 B26 2! 8+ 2 2 6 2.+ "8 7 " " 2 " " 9+ 2 2J 28 2!+ 59!" 5 2 3 5 !274+ 9"8+ 288"5 2 +3 @ 9 + !28C 9+ 2 2 3 968 +! 2 . D+ @26 "!B24 5""!C 3 2 " 3+!211!"1! 2 + !+2 B+ "!' 9+8+ 3 8+28+8 @9 4+ 9+ 2 2J 28 " "!.2 5 "! . B26 7+ 2B+4 "!2 +3 76 211!"1! 2 + B+28 !+8 42!.+46 " 2 +3 52 " 24 592!25 +! B2 6 " 9+ "!.2 5 2 2J 28 288"5 2 " 8 " 9+!' 92 9"8+ 7+ @++ 9+ "!B24 2 +!+ # "" !"B 8A B 854+8 -" 8 + 3" 8 2 3 7" +8 2 3 + +!+ B1 48+8 B26 7+ "!B+3 2 3 9+ 3 D 3 24 "7 2 "!+!+.2 2 3+.!++" 5""!3 2C " 82 8 25 "!6 "!' 9+ B"8 B1"! 2 1 !C 1"8+8 " 4 + "!' 9+ !+2 B+ " "4"5"B" "!' 2 2J 2 !2+ A+4 928 3+D 8+3 2 868 +B 3+ !2 C .@9 59 928 1!"3 5+3 2112!+ 46 @" 3+! 4 !+8 4 8 9+ 868 +B 3+1+ 38 1" 9+ 1! 5 C 14+ " 9+ 8 78 " "+" 9+!2 +!+ B1 48+8 "!' 9"8+ "!B2446 +B14"6+3 9+ 5""!3 2C " " B"D+B+ 9+ B"8 B1"! 2 8 7C 8 " 8 92 " D 8 24 2 3 B" "!' B1 48+8





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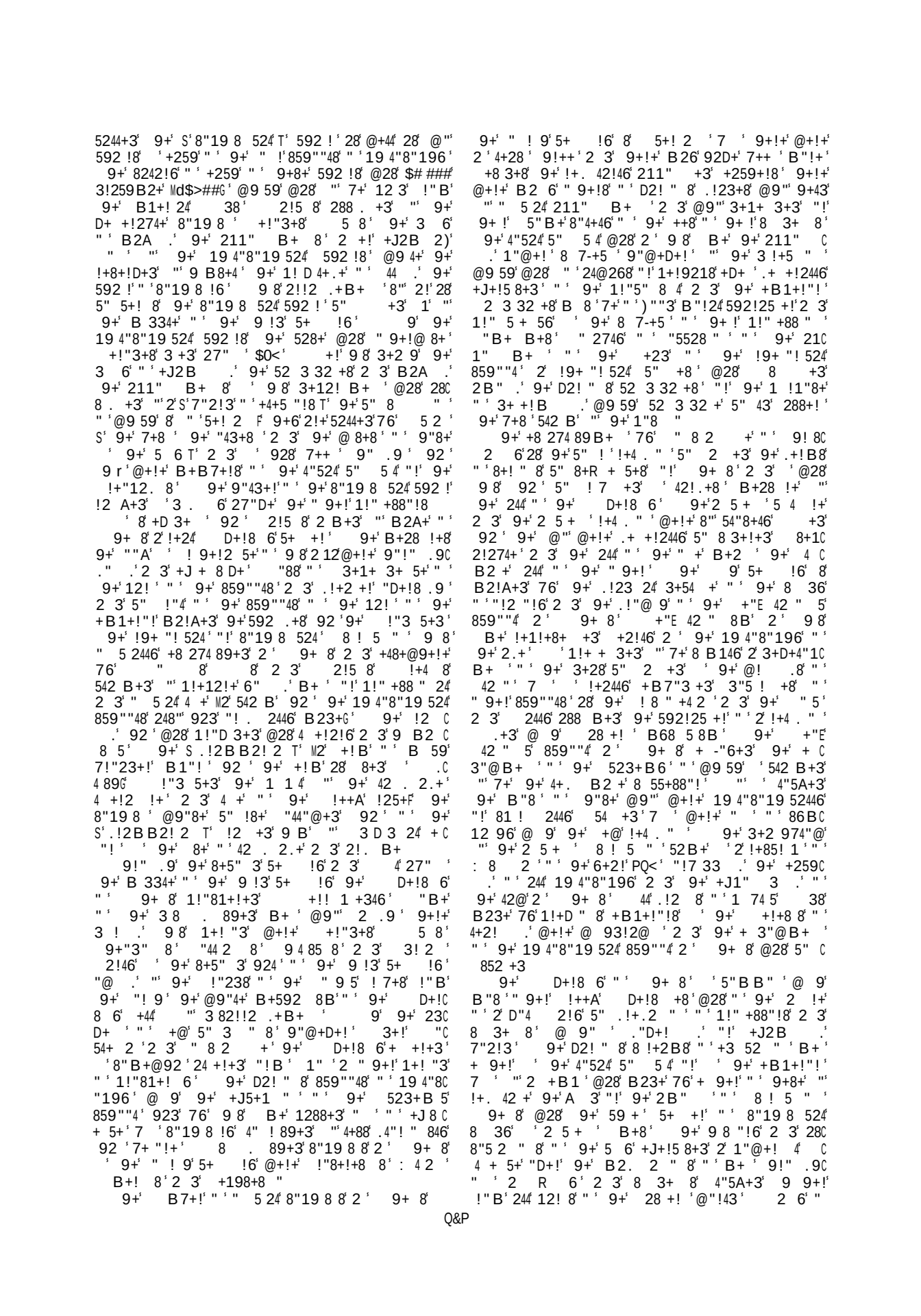

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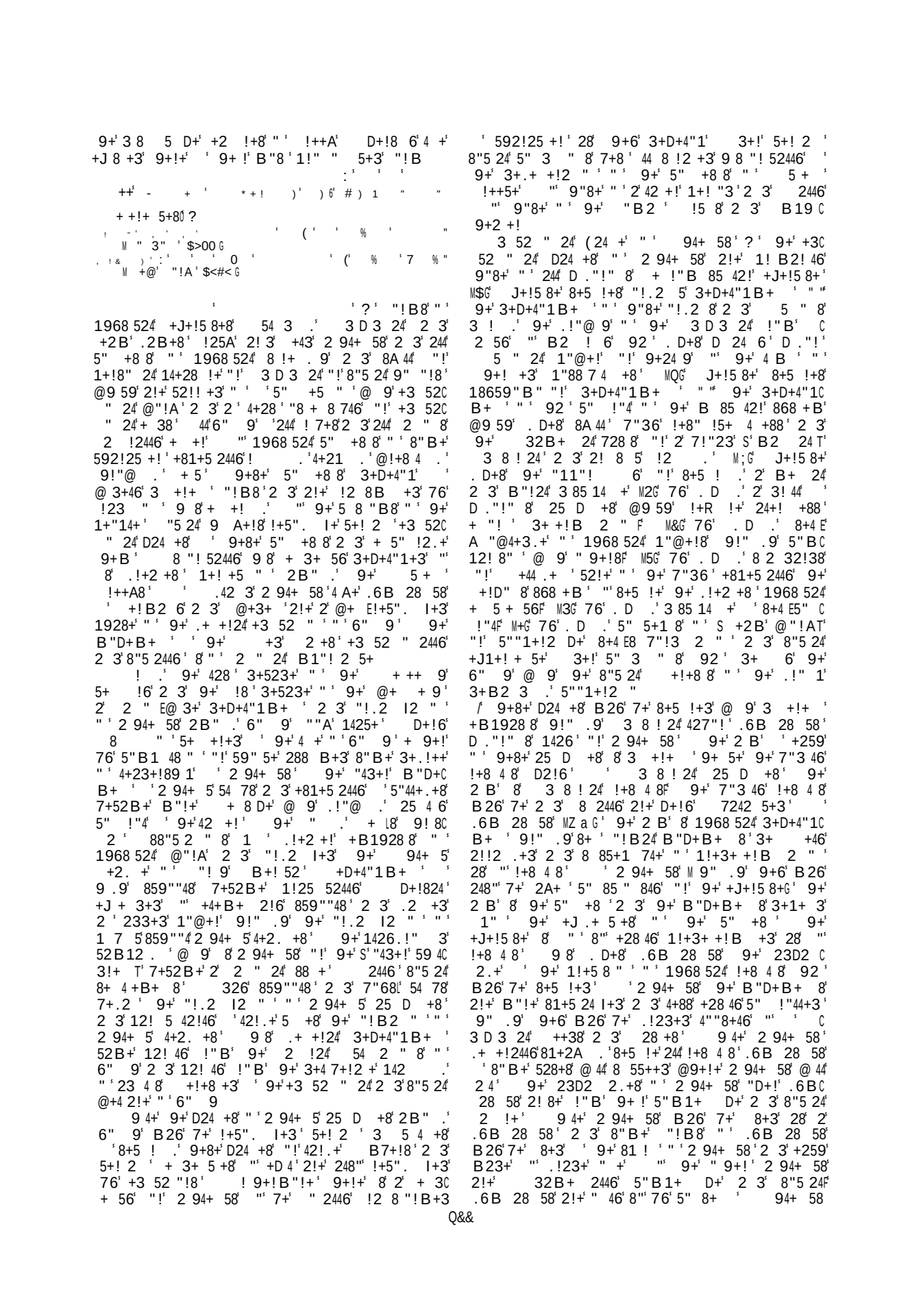

7+ .' 5"B1+ D+' 2 3' 8"5 24' !" 8+' 2' 7!"23+!'
!2 .+' "' 8"5 24' B1 48+8' 2 3' +B" " 8' 92 '
.6B 28 58' 9+6' ! 89' 1"88 7 4 +8' "!' 2'
3++1+!' 8"5 24' 8 B 4 8' 2 3' !2 .' 6B0
28 58' .2 ' 244' 32B+ 24' !+8 4 8' 7 ' 52 0
" ' 5"B12!+' @ 9' 2 94+ 58' ' 9+8+' 7!"23+!'
3 85 14 2!6' D24 +8' !"B' 9+' D +@1" ' "'
.+ +!24' +3 52 " ' 2 3' 2' 7!"23' 1968 524' +3 520
" ' 2 94+ 58' B 8' 7+' 5" 8 3+!+3' 5""!3 2 +'
@ 9' .6B 28 58' '5"B1"8 .' 9+' +59 R +' "'
1968 524' +3 52 " ' "!' 6" 9' 94+ 58' 1!"70
2746' 1"88+88' 9+' 42!.+!' D24 +8' 7 ' "' 7!"23'
!2 " 24' 868 +B' "' 1968 524' +3 52 " ' 52 ' 7+'
728+3' " ' + 9+!' 24" +
94+ 58' 7+ .' 5" +8 8' 7+ @++ ' @"' "!'
B"!+' 3D3 248' 2!+' +88+ 2446' 8"5 24' 2 3' !+0
R !+' "!.2 I2 " ' 9!" .9' B 24' 2.!++B+ '
+D+!24' 1"88 74+' .!" 1 .8' " ' 3D3 248' "!'
5" +8 8' B26' 2A+' 1425+' ' 2 6' 8"5 24' 5"B0
B 6' M$G @"'"!'B"!+' 3D3 248'"!'.!" 18'
" ' 3D3 248' B26' "!.2 I+' 81" 2 +" 846'
326' 76' 326' !!+81+5 D+' " ' 8"5 24' 2 42 " 8'
"!' 2' 5" +8 '"!' 2' 1+! "3' " ' 1426' 9 8' 8' 9+'
8 24' B+ 9"3' 2B" .' "@ ' 7"68' "@ ' B+ '
859""47"68' 2 3' B2 6' 5"44+.+' B+ ' " 59+3'
76' 2 ' 2 94+ 5' 288"5 2 " ' MQG' +!B2 + '288"0
5 2 " 8' B26' 7+' "!.2 I+3' "' ! 89' 25 4 +8'
"!' 5" +8 8' 2B" .' B+B7+!8' 28' 8' 8 2446' 9+'
528+' ' 4"524' 54 78' 8 59' 28' + 8' 2 3' ."4'
288"5 2 " 8' M;G 8 " 24' .!" 18' "!' 288"0
5 2 " 8' "!.2 I+3' "!' " 9+!' 5 " 8' 92 ' 2 90
4+ 58' B26' "!.2 I+' "!' 9+' 3+D+4"1B+ ' " '
25 4 +8' 2 3' 9+' 1!"B" " ' " ' +!+8 ' 28' 8
8 2446' 9+' 528+' ' 859""48' 2 3' 54 78' M=G
2446' 9+' B+B7+!8' " ' 9+' @9"4+' 5"B14+J'
.!" 1' 9+' 8 " ' "@ ' 5 6' "!' 2 " '
B26' "!.2 I+' 3+!' 9+' 2B+' " ' 9+' .!" 1' "!'
+!.!" 1' +! 8 " 24' "!' +! 2 " 24'
5" +8 8' @ 9' " 9+!' .!" 18' 9+' 5" 3 " 8'
2 +5 .' 9+' 3+D+4"1B+ ' " ' 2 94+ 58' ' 9+8+'
D2! " 8' .!" 18' 3 +!' 2 6' " ' 9+' + 3+ 5 +8'
"' +D 4' .!"@' @ 9' 1!".!+88' !"B' 9+' 8 B14+!'
"' 9+' B"!+' 5"B14+J' "!B8' " ' "!.2 I2 " '
3+!' 8 B14+' 5" 3 " 8' 9+' B2 2.+! 24' 5C
" ' 8' 3 +!+ 2 +3' 9' 9+' 3+D+4"1B+ '
" ' 2 94+ 58' ' "!B24' "!.2 I2 " ' 9+' B2 2.+C
! 24' 5 " ' 2! 8+8' 28' 2' 3 8 5 ' 81+5 24' "!5+
94+ 58' 4 A+' 244' .2B+8' 2!+' 1288+3' " ' 76'
!23 " ' ?'76' B 2 " ' 2 3' 76' 9+' "43+!' 2 3'
+A1+! + 5+3' +259 .' 9+' 6" .+!' 2 3' +JC
1+! + 5+3' 8' 2 94+ 58' 1!".!+88' ' "!B24'
"!.2 I2 " ' 9+' 8 ! 5 " 24' 5 " ' + 38'
"' 7+' 3 +!+ 2 +3' 2 3' 81+5 24 I+3' 2 3' 9+'
8 ! 5 "!' "!' 5"259' 3+D+4"18' @ 9' 81+5 24'
1"@+!8' "!' .""3' "!' +D 4
!+2 D+' "!5+8' ' 94+ 58' ?' 44' 9+'
D2! " 8' "!B8' " ' 2 94+ 58' 2!+' 5!+2 +3' 2 3' 244'
9+' 3 +!+ ' + 3+ 5 +8' ' 3+D+4"1B+ ' 2!+'
3+ +!B +3' 76' @"' 3 +!+ ' 54288+8' " ' +!+8 8'
' 5" +8 8' 5"BB" ' "' 244' B+ 0' 9+' 12! 5 0
12 L8' "!' 5" +8 2 L8' B1 48+8' 14+28 !+8' 2 3'
+!+8 8' ' 9+' 25 D +8' 2 3' !+8 4 ' " ' 9+'
5" +8 ' 2 3' 9+' 81+5 2 "!L8' B1 48+8' 14+28C
!+8' 2 3' +!+8 8' ' 9+' 5" +8 ' 2 3' 8' !+8 4 8'
28' 2' 81+5 254+

0 ' ' 9 % "' ?a' 9+' 5" +8C
2 L8' 14+28 !+8' 2 3' +!+8 8' 3+D+4"1' " ' " ' 2'
8+! +8' " ' 1426' + 3+ 5 +8' @9 59' B 8 ' 7+' 3+!C
8 ""3' "' 3+!8 2 3' 2 94+ 58' ' 9+' " 32C
" ' " ' 244' D ."!" 8' B 85 42!' 1426' 9+!+' 8' 2'
14+28 !+' ' 9+' B+!+' B" "!' 3 8592!.+' +J9 7 +3'
76' 9+' 6" .' " ' 244' 2 B248' ?' 2' 82 8 25 " ' " '
9+' 1! B D+' 9 .+!' "!' 25 D 6' "' 9+8+'
32B+ 24' 14+28 !+8' 9+!+' 2!+' 233+3' 2' 4" .'
8+! +8' " ' 14+28 !274+' +B" " 24' 8 2 +8' 9+!+'
8' 9+' 5" 4 5' " ' 32! .' 2 3' +2!' ' +2 8' 9+'
14+28 !+' ' 255"B14 89 -+ ' 2 3' 8 55+88' 9+'
14+28 !+' 2 3' 1! 3+' ' "D+!5"B .' 3 5 4 +8'
2 3' + 5" +! .' ! 8A' "!' 32 .+!' @ 9' 244' 8'
+B" " 24' + 8 " ' 9+' +J24 2 " ' 92 ' 5"B+8'
' 9+' !+7" 3' !"B' +2!' 9!" .9' !+4 + ' 9+'
+ 8 " ' " ' +J1+5 2 " ' 2 3' 89"5A' " ' 8 !1! 8+'
9+' 14+28 !+' "'+ 3 ! .' 92!389 18' 2 3' 8 11!+88C
.' 12 ' 9+' 14+28 !+' ' B28 +!6' " ' 8+4 ' 9+'
81 !2 " ' " ' 7+ .' 2' 52 8+' 2 3' 244' 9+' +B"C
" 24' 5" + ' 92 ' 9"438' 2 + " ' 2 3' 9+ .9 C
+ 8' 9+' !+24 6' " ' 4 +' @9 59' 8' "11"8+3' "'
+ ' 2 3' @9 59' "!' 9+' 23"4+85+ ' 8' 2' + !"C
4". 524' +5+88 6' 9+ ' 9+!+' 2!+' 9+' B1 48+8'
@9 59' 4 + 5+' 9+' "!B' " ' 1426' 9!" .9' 244'
59 439""3' 9+!+' 8' + 8+' 14+28 !+' ' 7+ .'
5928+3' 2 3' 5928 .' 9 3 .' 7+ .' 8" .9 ' 2 3'
8++A .' 9+' 5"B72 D+' 8"5 24' 2 3' +." 8 5'
B1 48+8' 211+2! .' ' 1426' !"B' +2!46' 59 43C
9""3 '7+5"B+' +81+5 2446' 1!"B + ' @ 9' 23"4+8C
5+ 5+' B14+' ! .' "!' 8' "@ ' 82A+' 8"" '
4"8+8' 8' 592!B' 2 3' B 8 '7+' ! +3' "' 2' 5" C
+8 ' 9 8' 82 8 6 .' 9+' 5"B72 D+' B1 48+'
"44 .' 27" ' " ' 9+' 4""!' 8' ! +3' "' 2'
884+' 9+' +." 8 5' B1 48+' 5"B7 +8' @ 9'
9+' 5"B72 D+' "' . D+' A++ +88' "' 3"' 8"B+ 9 .'
28' @+44' 28' "!' 7+ +!' 92 ' 8"B+' " +'+48+' 9 8'
+ 3+ 56' 7+5"B+8' 1+5 4 2!46' 8 !" .' ' 9+' 23"C
4+85+ ' 1+! "3' #:" "&!' 9+' 2 94+ 5' 2.+
9+' 8"5 24' B1 48+8' @ 9' 1+!9218' 8"B+' 8+J 24'
+4+B+ 8' 233' 9+ !' "!5+' ' 3+8 !+' "!' 8"5 24'
21142 8+' 2 3' 211!"72 " ' 4+238' " + ' "' 8+4 C
+J9 7 " ' 2 3' 2' 3 81426' " ' 8A 44' "!' 5" !2.+'
81+5 2446' A++ ' 8' 9+' 14+28 !+' " ' 259 +D+B+ '
' 5"B1+ " ' 3+!' 8"5 24' 5" 3 " 8' 1+!9218'
9+' 9 .9+8' 8 B 4 8' 2 3' 82 8 25 " ' ' 6" 9' "'
9+' +." 8 5' B1 48+8' 2 3' +B" " 8' !2D .8'
"!' 8+4 E +8 .8' 8+4 E+D24 2 " ' 9+' 3+ +!B C
2 " ' " ' " +L8' 8"5 24' 8 2 8' 7+5"B+' 1!"B C
+ ' 9+!+' 9+8+' B1 48+8' 5"B+' ' 5" 25 '
@ 9' 3+D+4"1+3' "!' !23 " 24' 1426' 25 D +8'
28' ' 2 94+ 58' 9+!+' 2! 8+8' 81" 2 +" 846' 2'
5!2D .' "' .2 ' " +L8' 1425+' ' 9+' 8"5 24' 868 +B'
"' 7+5"B+' 2' B+B7+!' " ' 9+' +2B ' "' !+1!+8+ '
" +L8' +44"@8' "' 8 11"!' 9+' 9" "!' " ' 9+'
.!" 1' 2 3' "' @ ' 9+' 82 8 25 " ' 2 3' 21142 8+'
" ' 259 +D+B+ ' "' .2 ' 9" "!' 74 5' +!+8 '
+ 8 +8' 9+8+' +J1!+88 " 8' "' 7+' 1!"B + '
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" ' 8"5 24' B" D+8
94+ 58' 2!+' 9+ ' 9+' B"!+' "!B24' 5" +8 8'
2B" .' 14268' 2 3' .2B+8' 4 B +3' 76' "!B24' ! 4+8'
2 3' 2!!2 .+3' 76' 8"5 24' 82.+' "!' 2.!++B+ ' "'
. D+' 9+' 42!.+8 ' 82 8 25 " ' "' 9+' 5"B72 D+'
+." 8 5' 2 3' 8"5 24' B1 48+8' 2 3' +B" " 8

9+ 1! B2!6 5+ D+ 2 94+ 58 8 "8+5 !+ 9+8+ 14+28 !+8 4 + 5+3 !"B @ 9" 9+!+ 8 ""9+!5" 85 " 8 2 B 92 9+8+ 14+28 !+8 9 9+ 3+D+4"1B+ " 2 94+ 58 8"5 24 1!"B + 5+ B" D+8 7+5"B+ B"!+ 2 3 B"!+ 8"5 24 5+ +! . 9" "! 8+! +8 " 8+5" 32!6 +!+8 8 2 3 B" D+8 2! 8+ 8 59 28 2 3+8 !+ "! 8"5 24 1!"B + 5+ 4+23+!89 1 "!1"@+! 3+!9+ 8 B 4 8 " 8"5 24 21142 8+ 2 3 9+ 3+8 !+ "!9" "! 9+ 1! B2!6 14+28 !+8 9+ 5" +8 B26 7+ !+1425+3 76 3 85"B "! "! 92!389 1 "!+D+ 12 6+ 9+ B" D+ 8 8 2 8 9+ + "! " 9+8+ 9 .946 3+D+4"1+3 B" D+8 9+ 3+8 !+ "! B2 +! 24 .2 8 233+3 9+ 2 B 7+5"B+8 1!" +88 " 24 "@ 9+ B"D+8 9+ 3 D 3 24 89244 3+D+4"1 8 3+ +!B +3 76 9 8 +B1+!2B+ 2 3 9+ 8"5 24 5" 3 " 8 8 !!" 3 . 9 B 8 9+ 8" " 81+5 24 I+3 8"5 24 B" D+8 8"! 2! 28 9+ 2 94+ + 8 5" 5+! +3 92 B"8 " 9+ 3 5 4 +8 2 94+ 58 3+D+4"1

9+ 2 !+" 9+ 5+ D+8 92 5!+2 + 1426 2 3 2 94+ 58 2 3 9+ ++3 " D ."!" 8 + !"B 85 42!25 D +8 3 ! . 9+ + !+ 1+! "3 " .!"@ 9 2 3 3+D+4"1B+ " "!3+!" "! !+24 I+ 7"3 46 1"@+!8 !+D+24 9+ 5 " 8 2 3 B+2 . " 2 94+ 58 2 !+ B23+ 9+ 1426 B 1 48+ 9+. 2!3 2 "1968 524 2 3 B+ 24 ++38 8 5" +8 8 211+2!@ 9 2 3 2!+ +81+5 2446 592!25 +! 8 5 " 9+ 23"4+85+ 1+! "3 9+6 B26 2 !46 7+ 5" 8 3+!+3 9+ 2 !24 D ."!" 8 +J+!5 8+ " 6" 9 9 8 8+ 8+ 9+6 B26 7+ +!1!+ +3 28 2 !+!8 B+2 8 "1968 524 +3 52 " 3 ! . 9+ 23"4+85+ 1+! "3 9+ 1! B2!6 B" D+8 2 94+ 58 2 3 9+ "!B24 !+8 4 8 2!+ 1 !+46 +3 52 " 240 9+ 6" 918 2 B 5" +8 8 8 14+28 !+ 2 !+!8 2 B 8 +3 52 " 9+8+ 25 D +8 6" 9 928 9+!+ ! .9 8 2 3 8"5 + 6 8 1!" " 346 2 +5 +3 B"!2446 2 3 8"5 2446 76 2 +.4+5 "!! 1!" +5 " " 9+8+ ! .9 8 9+ 1425+ " 2 94+ 58 2B" . 9+ 8"5 24 5 8 "B8 " 2 1+"14+ 2 3 2 +3 52 " 24 868 +B B 8 7+ 3+ +!B +3 9+"!+ 52446 76 9+ +5+882!6 2B" " 32 46 D ."!" 8 25 D 6 !+R !+3 3 ! . 9+ 8 55+88 D+ 6+2!8 " 6" 9 "3+D+4"1 5"B14+ +"!.2 5 1"@+! 2 3 32 B+ 24 18659"B" "!8A 44 76 9+ !+42 D+ 8 1+! "! 6 " 2 94+ 58 "2 6 " 9+! D ."!" 8 25 D 6 "!B"!24 2 3 8"5 24 3 85 14 + 2 3 76 9+ 4 + 5+ " 9+8+ 25 D +8 " 9+ .+ +!24 !+5!+2 D+ 2 3 8"5 24 5 8 "B8 " 9+ 1+"14+

0 ' % 9 % " ? 9+ 81+5 2 "!/8 +!+8 2 94+ 58 4 A+ 9+ 12! 5 12 8 2! 8+8 !"B 2 3++1E8+2 +3 + 3+ 56 9 B2 2 !+ 8 54"8+46 !+42 +3 " 9+ 3!2B2 5 +!+8 9+ 8 ! ..4+8 " " 9+!8 +J5 + 285 2 + 8@26 9!" .9 86B12 96 9+ 81+5 2 "!+ +!8 " 9+ 8 ! ..4+ 81+5 2446 8 !" . 8 9+ +J5 +B+ . 5" +8 8 B2 2 !+ 4"D+8 " 8++ 2 .9 9+ +J !+B+8 " +B" " 2!" 8+3 2!+ 7+8 44 8 !2 +3 76 9+ @"!43!8 .!+2 .9 .81+5 254+80 9+ .423 2 "! 24 5" +8 9+ 592! " !25+ 2 3 9+ 7 44 .9 " +2!4 +! B+8F 9+ 9"!8+ !25+ 9+ 1! I+ .9 2 3 9+ 1!" +88 " 24 728+724 5" +8 "

B"3+B B+8 9+ 4+88 +J !+B+ +J1!+88 " 8 2!+ 8++ 9+ 8 11"! " !2D+4 . 25!"72 8 "" !25+!8 2 3 .2B+8 " + 3+3 "!81+5 2 "!8 " 9 8 1! B24 +!+8 2 8 ! .4+ 5"B B" " 244 9 B2 7+ .8 +D"4D+8 9+ 81+5 2 "!

9+ 2 !+" 9+ 5" +8 92 @ 44 82 8 6 3 +!+ 3 D 3 248 3+1+ 38 " 592!25 +! +44 .+ 5+ !2 . 5 4 !+ 2 3 4 + 5" 3 " 8 " +8 3+ 9+!+ 2!+ 9"8+ @9" 2!+ 82 8 +3 @ 9 9+ 14+28 !+8 " 2 8A 44 4 5" +8 7+ @++ .+ 4+B+ " 9+ " 9+! 9"8+ @9" 2!+ 82 8 +3 " 46 @ 9 2 +!5+ 1+!8" 24 " + 7! 24 5"B72 92 !+D+248 2 3 !" 8+8 1! B D+ 9 B2 1288 " 8 + @++ 9+8+ @" +J !+B+8 2!+ 244 14+28 !+ 8++A+!8 2 2 2 94+ 5 5" +8 9+ 3+D+4"1B+ " 2 244 81"! 8 9+8+ @" 54288+8 2!+ +D+! "11"8 " 9+ 3+8 !+8 " 9+ " + 9+!+ "!+ 8 4 + 5+ 2!+ 3 !+5 "11"8 " " 9+ " 9+! + 9+! 52 7+ 82 8 +3 1+!B2 + 46 @ 9 @92 14+28+8 9+ " 9+! 9+ 3+D+4"1B+ " 2 94+ 58 9+ .!" 1 @ 44 7+ 255"!3 . " @9 59 +4+B+ 3"B 2 +8 9+ 5!+2 " " 1 74 5 8+ B+ 1!"1"!C " 28 9+ +J !+B+ 81+5 254+E4"D . +4+B+ 52 B2A+ 8 3+8 !+8 +4 @ 44 9+ 2 E8"5 24 + 3+ 5 +8 !+D+24+3 9+ 3+8 ! 5 " " B2 6 81"! 8 9+ 128 !+211+2! 9+ 9 B2 + 3+ 5 +8 +J9 7 +3 9+ B"!+ "! 4+88 +J 5 "! 3 8.!25+3 5" +8 8 " 9+ 128 2!+ 8 44 25 D+ 2 3 !+D+24 9+B8+4D+8 2 94+ 58 "E326 28 "43+! B+8

2 6 592!25 +!8 2!+ " 82 8 +3 @ 9 9+ +B" " 8 5" +5 +3 @ 9 9+ 81+5 254+ 24" + 9+6 B 8 1426 @ 9 9+ +B" " 8 " 592 5+ 2 3 + 8 6 9+ 14+28 !+8 9+ 81+5 254+ 76 2 @2.+! " 9+ !+8 4 9+ 5+ .2B74 .7+5"B+8 288"5 2 +3 @ 9 9+ 5" +8 ! 9+!B"!+ B2 6 4 D+ "D+! 2 +B" " 24 !+D+!7+!2 " " 9+ 5" +8 2 +! 8 89+3 9 8 3+D+4"1 . 2 94+ 5 ."88 1 2 3 9+ 81"! .89++ +@8 121+!8 @9 59 ! 2!" 8+8 9+ 82B+ + 3+ 5 +8 " 9+!8

9+ 81+5 2 "! +D+!6@9+!+ + 38 "2A+ 8 3+8 2 3 7+5"B+ 2 12! 82 9 9+ 3+D+4 "1B+ " 2 94+ 58 9+ "!.2 I2 " " +!C .!" 1 5" +8 8 2 2 9+ 8+4+5 " " 2 +2B "!+1!+8+ 9+ .!" 1 12! 82 2 94+ 58 2! 8+ 9+ 81+5 2 "! 7+5"B+8 2 8 " 24 12! 82 2 3 2A+8 " 2 +@ 1"@+! "! 4 + 5+ "5 24 1! 3+ 542 89 +88 ! D24!6 2 3 244 9+ +B" " 8 +J9 7 +3 76 2 .!" 1 5"B1+ " @ 9 2 " 9+! .!" 1 8 !!" 3 9+ 5" +8 !" 1 7+5"B+8 2!!26+3 2.2 8 .!" 1 9+ 5" +8 + 38 "2A+ " 9+ 592!25 +! 8 58 " .!" 1 @2! 74 5 +!+8 7+5"B+8 12! 82 2 3 9+ 12! 82 2 B 7+5"B+8 9+ 3"B 2 2 B +!+8 5+ +!8 9+ +B" " 8 5" +5 +3 @ 9 9+ 592 5+8 " @ . 2 3 89 8 " 2 +B192 8 8 " !+8 4 8 2! 82 3+B" 8 !2 " 8 233 " 9+ 81+5 254+ @9 59 2 !25 8 2 +D+!E@ 3+ . 5 !54+ " 81+5 2 "!8

9+ 4 + 5+ " 9+ 81+5 2 "!+ " 9+ B"!+ 5"B14+J 3+D+4"1B+ " " 2 94+ 58 928 7++ 1!" " 3 9+ 81+5 2 "!8 14+28 !+ 9+

8A 44+3 +J9 7 " "!5" +8 2 3 9 8@ 44 . +88 "126" "! 9+ 14+28 !+ 233+3 " 9+ +5" "B 5 ++38 " 8"B+ 8A 44 1+! "!B+!8 92D+ 5!+2 +3 9+ 1!" +88 " 2 94+ + 2 3 1!" +88 " 2 B2A+8 2 7 8 +88 " !2 .2 3 3+D+4"1 .1+!8" 2 8A 44 "8 1146 2 8"5 3 3+B2 3 "! 2B 8+B+ 8 25 D +8 52 "4" .+! 7+ 54288 +3 28 1426 .2 9+ 81+5 2 "! 28 3 52 +3 9+8"5 2 +4+B+ 8 " 9+ 5" +8 2 8 42 .21142 8+ 211!172 " 2 3 9" "!8 2 3 28 9 8 +!+8 5+ +!8 " 9+ B"!+ +J5 . 5" +8 8 2 3 9+ B"8 8A 44+3 2 94+ +8 9+ + 38 "B"43 9+ 2 94+ +8 B" D+8 2 3 9+ "!B " 9 8 25 D +8 9+ 2 94+ +8 B" D+8 2 3 9+ 81+5 2 "!8 +!+8 8 + 3 "5"B14+B+ +259 " 9+! 9 8 + 3+ 56 8 12! 5 42!46 5" 81 5 " 8 +!.!" 1 12! 82 2 94+ 58 9+ 8 85+1 7 4 +8 " 3 +!+ 3 D 3 248 "9+ 4 + 5+8 " 9+ 81+5 2 "!D2!6 .!+2 46 7 9+ 5"B7 2 " " 9+ 81+5 24 I+3 8"5 24 B"C D+8 8"B+ 2 94+ +8 2 3 9+ 81+5 2 "!8 3+8 !+8 + 3 "9+ 3+D+4"1B+ " 2 "!B " 81+5 24 I+3 9 .946 8A 44+3 2 94+ 58 1! B2! 46 "! 9+ 2B 8+B+ " 9+ 81+5 2 "! 9+ 2 94+ + !+R !+8 81+5 24 !2 . 9 8 +B192C 8 I . 9+ 5"259 . 5 " F 9+ 81+5 2 "!8 +!+8 8 !+R !+ B2 2.+B+ 9 8 +B1928 I . 9+ B2 2.+! 24 5 " 9+!+ "!+ c + 4 C + 5+ " 9+ 81+5 2 "! @9 4+ 2 8 B 42 . 9" .9 +88+ 24 "!5+ 9+ 3+D+4"1B+ " 2 94+ 58 + 38 "@2!3 2 2!!"@ 9 .946 8A 44+3 "!B " 2 94+ 58 !2 9+!" 92 " "@2!3 2 @ 3+ .8@26 " 9+ 2 94+ 5 +!+8 28 2 +3 52 " 24 "!5+ + 5+ 9+ 81+5 2 "! 2 3 9 8 4 + 5+ 2!+ 9+ B "8 8+! " 8 1!"74+B 9+ 23D2 5C .1"@+! " 2 94+ 58

- (% " ? B7+! " +D 48 2!+ 288"5 2 +3 @ 9 2 94+ 5 25 D +8 7 2 3 8C 5 " 89" 43 7+ B23+ 7+ @++ +4+B+ 24 + 3+ 5 +8 " +D 4 2 3 9+ +J2..+!2 +3 5"B 14 C 52 " 8 " 9+8+ +D 48 9!" .9 81+5 5 4 + 5+8 9+ 3+D+4"1B+ " 2 94+ 58

$ 9+!+ 8 9+ + 3+ 56 288"5 2 +3 @ 9 244 D ."!" 8 25 D +8 "1968 524 - !6 9 8 + 3+ 56 8 5!+28+3 76 2 3 D 3 24 8 5"B C 1+ . 25 D +8 "!@9 59 9+ 8 +3 23+R 2 +46 !2 +3 "! B1!"1+!46 +R 11+3 "!2.2 8 3 D 3 248 " "9 8 54288 "!@9 4+ 2 . +3 + 5 9+ + 3+ 56 B26 7+ B C B I+3 76 1!"1+! 81+5 " 54288 52 " 2 3 !2 .

Q 9+!+ 8 9+ + 3+ 56 288"5 2 +3 @ 9 B2 6 14+28 !274+ 25 D +8 "D+! 3 4.+ 5+ @9 59 !+8 4 8 1968 524 92!B 2 3 2 3 88 12C " " B+ 9 8 8 59 + 46 2 1!"3 5 " 44E 23D 8+3 + 9 8 28B 2 3 8 +J2..+!2 +3 76 9+ 1!+88 !+ " 12! 82 ! D24!6 8 +4 B 2 +3 76 5"B1+ + 8 1+!D 8 " "!4+23+!89 1 ; 9+!+ 8 9+ + 3+ 56 "81+5 24 I2 " @9 59 B26 !+8 4 7242 5+3 3+D+4"1B+ 2 3 "! 2 + 1426 927 8 8 +J2..+!C 2 +3 2! 5 246 76 9+ 1!+88 !+ " 12! 82 ! D24!6 +!.!" 1 5"B1+ " B26 7+ +4 B 2 +3 76 5"B1+ + 8 1+!D 8 "

= 9+!+ 8 9+ + 3+ +6 5"B B" "4 8"5 24 5"B1+ " 723 B2 +!8 "!! C 27 4 6 3+ +2 2 3 .4"2 . D 5 "!6 9" .9 3 D 3 248 3 +!.!+2 46 9+8+ + 3C + 5 +8 9+ + 3+ 56 8 +J2..+!2 +3 76 723 1426 !23 " 8 9+ .!" 1 76 723 4+23+!89 1 76 3 8!+81+5 "!! D248 76 723 !+2 B+ " 9+ 12! " ! D248 2 3 76 9+ 1!+88 !+ " 12! C 82 8 B26 7+ 5" !"44+3 76 8 !" .4+23+!C 89 1 7 43 .@9"4+8"B+ 1426 8 2 32!38 2 3 76 ."3 B2 2.+B+ 8 ! 5 " 2 3 3 85 C 14 +

P 9+!+ 8 2 + 3+ 56 "+D28 " 8 " 9+ ! 4+8 " 9+ .2B+ 9+ ! 4+8 2!+ 2! 54+8 " 2.!++B+ 3+!@9 59 2 ! 24 " 8A 44 8 "7+ B23+ D "42 " 8 " @9 59 2!+ 3 89" +8 9+ 4 B 2 " 8 " 9+! 4+8 " +! +B1 2 " 8 @9 59 +8 592!25 +!2 3 !2 . 9+ + 3+ 56 8 +J2..+!2 +3 76 723 1426 !23 " 8 76 D 5 " 8 ! 5 " 8 !"B 5"259+8 76 8 81 5 " " ! D248 76 12! 82 1!+88 !+ "@ + 5 9+ + 3+ 56 B26 7+ 5" !"44+3 76 8 !" .4+23+!89 1 3+D+4"1B+ " 8+ B+ 2B" .2 94+ +8 2 3 76 2 23B 8 !2 " 92 5" +!25 8 9+ 4 + 5+ " 9+ 81+5 2 "!

&' 9+!+ 8 2 + 3+ 56 "D "42 " 8 " 9+ 1! 5 14+8 " 54288 52 " 2 6 .!" 1 @9 59 3+! 9+ 42@ " 12! 5 12 " 2!!"@8 12! 5 C 12 " 9 8 + 3+ 56 8 8++ 3+!8 B14+ 5" 3 " 8 2 3 8B244 .!" 18 @9+!+ 9+ "43+! 8 !" .+! 2 3 B"!+ 2..!+88 D+ +4 B 2 + 9+ 6" .+! @+2A+! "! B 3 !"B 5+! 2 .2B+8 8 8++ 3+! 5"B14+J 5" 3 " 8 42!.+ .!" 18 @9+!+ 9+!+ 8 2 +B1 2 " " +.4+5 1426+!8 4+88 8A 44+3 92 9+ +@ 7+8 "! " 8+ 1426+!8 " 4+. B2 +46 B+B7+!8 " 9+) " 1 9+ + 3+ 56 "D "42 +2 255+1 +3 54288 52 " 2 3 9 8 " .2 2 23D2 2.+ 8 8 ! A .46 +J2..+!2 +3 9!" .9 9+ 1!+88 !+ " 12! 82 ! D24!6 9+ +!+8 8 " 9+ 1!" +8C 8 " 24 5"259 2 3 8 81 5 " " ! D248 +!C .!" 1 5" +8 8 9 8 + 3+ 56 B26 7+ B C B I+3 76 +3 52 " 24 4+23+!89 1 92 @ 44 5" !"4 9+ 4 + 5+ " 12! 82 2 3 5"259 74 5 "1 " B26 9+!+ 7+ D+!6 + +5 D+ M ++ #

0 9+!+ 8 9+ + 3+ 56 "! 2 94+ 58 " 5"B+ 3+! 9+ 5" !"4 " 9+ 81+5 2 "! 2 3 3+D+4"1 " 81+5 24 I+3 +!.!" 1 12! 82 5" +8 8 @9 59 ! + 38 "3+8 !"6 .+ +!24 12! 5 12 " 2 3 9+ 8"5 24 !+81+5 "!2 94+ 58 9 8 + 3+ 56 8 +81+5 246 8 !" . 9+ 42 +! 6+2!8 " 6" 9 9 9+ 3+D+4"1B+ " +!.!" 1 5" +8 8 9+ 3+8 !+ " @ + 38 " 7+5"B+ +J !+B+ !" 1 1! 3+ 8 D"4D+3 2 3 8 55+88 5"D+ +3 28 2 9" "! 9 8 + 8 C 52 " " 9+ 3+8 !+ " @ 2 3 9+ +J2..+!2C " " 9+ B1"! 2 5+ " @ . + 38 " 3+8 !"6 9+ 592!25 +! " 2 94+ 58 28 1426 !2 . "! 8A 44 8 1 89+3 " 9+ 4 B " 6" 9 4 + 3 !2 5+ @9 59 9" .9 9+ 3 85 C 14 + B26 7+ 5"B B+ 3+3 +@ 3 D 3 248 2!+ 521274+ " + 3 ! . J5+1 " 24 3 D 3C 248 B 8 52!!6 9+ 7 !3+ 8" 9+!+ 8 8+4+5 +3 2 81+5 24 .!" 1 " 2 94+ +8 " @9 59 81+5 2 "!8

5"259+8 2 3 B2 2.+!8 "5 8 9+ ! 2 + " 4+2D . 9+ B2-"! 6 " 9+ .!" 1 "!." + 2 3 +.4+5 +3 J5+1 " 24 3 D 3 248 2!+ 852!5+ 9+ 5+ 12! 82 8 8+2!59 "! 9+B 2 3 1!"8+46 . "! !+5! . B+ 9"38 3+D+4"1 @9 59 + 3 " 5"!! 1 D "42 " 8 " 9+ 42@8 " 54288 52 " D+ "! 9+ +J5+1 " 24 2 9C 4+ + 1426 8 592 .+3 " @"!A 2 3 9+ + +!.6 2 3 B+ 5" 8 B+3 9+ B2J B B 8 2 2 !24 !+8 4 9+!+ 3+D+4"18 8"B+ 2 94+ +8 9+ R +8 " F 92 8 9+!+ Z 9 8 9+ 12! 82 + 38 " B++ 76 +J !2 + 5" !2.+C B+ 8 3 5+B+ 8 9" "!8 2 3 !+@2!38 2 3 1+ 6 1!" +88 " 24 1!25 5+8 3+D+4"1 @9 59 2!+ 1+!1+ 2 +3 76 5 8 "B 2 3 9+ + 9 8 28B " 12! 82 8 9+ +J !+B+ 81+5 24 I+3 !2 . 2..!2D2 +8 9+ 4+88+! + 3+ 5 +8 " +D 4 " 2D" 3 @9 59 2! 5 24 B+ 9"38 2!+ 23"1 +3 !2 +!8 ! 77+!8 2 3 9+ !2 . 274+ 2!+ +B14"6+3 " B++ 9+ 1968 524 ++38 " 5 248 2!+ B 4C 14 +3 " B B I+ 9+ + 3+ 5 +8 " 8"5 24 25 8 2 3 D "42 " 8 " 9+ ! 4+8 " 9+ .2B+F 2 3 5"B14+J +4 . 7 4 6 5"3+8 2!+ "!B 42 +3 " !+3 5+ 9+ + 3+ 56 " . "!+ 9+ 42@8 " 54288 52 "

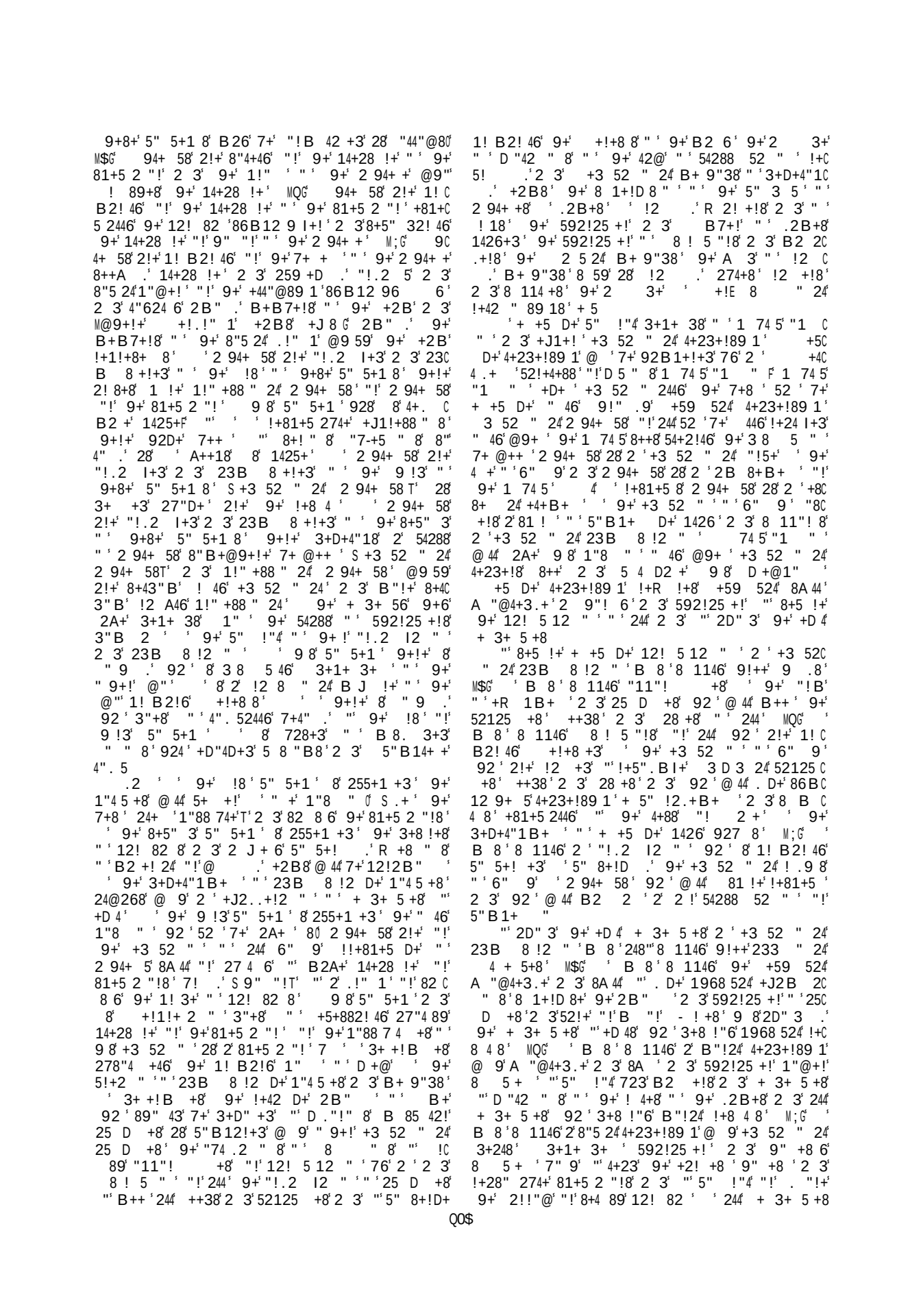
" 9 9+ B2 2.+! 24 2 3 8 ! 5 " 24 5C " 8 + 3 " 7+5"B+ " 2446 3 D"!5+3 !"B 9+ 1426 ++38 " 9+ B288+8 " 6" 9 2 3 " 7+C 5"B+ 9 .946 81+5 24 I+3 2.+ 8 " 9+ 81+5 2 "! 9+ 5"259 7+ .- 3.+3 76 9+ !+8 4 8 " 5" C +8 8 5" 5+ !2 +8 9 8 + "! 8 " +J5+1 " 24 2 94+ +8 9+ B2 2.+! 7+ . 3+1+ 3+ " 9+ 81+5 2 "! "! 2 5+8 + 38 " B2 2.+ 8"4+46 9+ +!+8 " 9+ 81+5 2 "! 9 8 B2 2.+B+ 2 3 9+ +J1+ 8+8 5" +5 +3 @ 9 9+ +R 1B+ " +2B8 5"8 " .2B+8 2 3 ! 18 " 5 248 !2 . 274+8 5"259+8 !2 +!8 ! 77+!8 3"5 "!8 7 448 B+3 524 8 114 +8 9" "!8 !+@2!38 1! D 4+.+8 + 5 + 3 " 8 !!" 3 2 94+ 58 @ 9 2 8 !" .5"B B+!5 24 2 B "819+!+ @9"4+8" B+ 2 3 3+8 ! 5 D+ " 9+ 1426 81 ! 9+ 24 + 3+ 56 " 12! 82 2 94+ 58 8 "@2!3 2 7 8 +88 D"4D . 2 +@ 81+5 24 I+3 2 94+ +8 1+! "!B . "! 9+ 82 8 25 " " 12! 82 8 @9 59 8 +88+ 2446 1!" +88 " 24 B+ 9"38 2 3 5"B B+!5 24 592!25 +! " 9 + 38 " 4"8+ 244 8+ 8+ " 2 94+ 58 28 2 2 !24 D24 274+ 2 3 3 . +3 25 D 6 2 3 1 74 5 "1 " + 38 " 5" 8 3+! 2 94+ 58 B+!+46 28 2 81+5 254+ "@ 2! 9 8 +D"4 " @ 44 1!"C 5++3 9+ "!.2 I+3 2 94+ 58 2 6 .!" 1 @ 44 3+1+ 3 1" " 9+ 2.+ " 9+ 5" +8 2 8 2 3 9+ +4+B+ 8 " 7+ 5" 8 3+!+3 3+! 5" C !"4

+D+!24 25 "!8 + 3 " +J2..+!2 + 9+ 81+5 24C I . 4 + 5+ " 9+ 81+5 2 "! 9+ 1!+88 288"5 2 +8 12! 82 5" +8 8 " @ 9 +3 52C " 24 "1 58 7 @ 9 1!" +88 " 24 728+724 1! I+ .9 . 2 3 9"!8+E!25 ."88 1 9 8 B 8. 3 . 1 74 5 "1 " 3 52 "!8 5" C 5+ !2 +3 " +44+5 24 +3 52 " + 3 " 2D" 3 4+23+!89 1 9+ " 3""! 4 + " 6" 9 9+6 + 3 " 4+2D+ B2 2.+!8 5"259+8 2 3 1426+!8 @ 9" 8 1+!D 8 " 8 7-+5 " 9+ 3"B 2 " " 12! 82 8 2 3 !++ " 8+ 9+ !

"@ B+ 9"38 . +2B8 92D+ 7++ 288"5 2 +3 @ 9 9+ 23D+! 8 . B"D+B+ +81+5 2446 5"44+.+8 2 3 9 8 4+238 +3 52 "!8 " "4+!2 + @9"4+8" B+ 1!25 5+8 9+ 82B+ !+8 4 8 4"@ !"B 8 81 5 " " ! D248

 9+8+ 8+D+!24 + 3+ 5 +8 " +D 4 2 9C 4+ 58 9+ !8 9!++ "! 9+ + 3+ 5 +8 " 1968C 524 - !6 "D+! 3 4.+ 5+ 2 3 81+5 24 I2 " !+3 5+ "! 3+8 !"6 9+ D24 274+ 1968 524 !+8 4 8 " 1426F 9+ " ! 9 2 3 9 "! 9+ + 3+ 5 +8 " 723 B2 +!8 2 3 D "42 " 8 " 9+ ! 4+8 " 9+ .2B+ !+3 5+ "! 3+8 !"6 9+ D24 274+ B"!24 !+8 4 8F 9+ 8 J 9 2 3 8+D+ 9 "! 9+ + 3+ 5 +8 " D "42 " 8 " 9+ 42@ " 54288 52 " 2 3 " 5" !"4 76 81+5 2 "!8 !+3 5+8 "! 3+8 !"68 9+ +3 52 " 24 D24 +8 " 2 94+ 58 "! 9+ B2 6 2 3 9+ 8"5 24 !+81+5 "! 2 94+ 58 2B" . 8+! " 8 1+"14+

 8 54+2! 92 9+ + 3+ 5 +8 " +D 4 5!+28+ 8+! " 8 +88 28 6" 9 211!"259+8 B2 ! 6 28 9+ +!.!" 1 "!.2 I2 " 7+5"B +8 +BC 1928 I+3 2 3 28 9+ 12! 82 81 ! 3+D+4"18 " ? 9+ B1"! 2 5+ 2 3 9+ D24 +8 " 2 94+ 58 9+ 4 + " 6" 9 9+ 25 "!8 5" C !"44 . 12! 5 12 " 2 3 9+ + 3+ 5 +8 " +D 4 89"@ 2 ++3 " 23B 8 !2 D+ 2 9"! 6 V@ 9 42!.+! VD 8 " 2 3 7!"23+! +3 52 " 24 1"@+!8 92 2!+ 1"88+88+3 76 6" 9 J1+! C + 5+ 928 89"@ 92 9+ 1426 + " 7" 9 59 4C 3!+ 2 3 6" 9 B 8 7+ 8 1+!)D 8+3 9+ D24 +8 " 1426 2!+ " 7+ 8+5 !+3 2 3 9+ +D 48 +4 B 2 +3 9 8 5" !"4 7+5"B +8 5!+28 .46 B1"! 2 @ 9 9+ 23D2 5 . 6+2!8 " 6" 9 7+52 8+ 9+ 25 "!8 + 3 . " +4 B 2 + !"B 12! 5 12 " 2 3 9+ + 3+ 5 +8 " +D 4 7+5"B + B"!+ 4 + 24 9+ D24 +8 " 2 94+ 58 2!+ 9+ "!B24 1!"3 5 " 9+ 2 94+ 5 B1 48+F 9+ +D 48 2!+ 9+ 1!"3 5 " 9+ . "!2 5+ " 6 9 8"5 24 4 + 5+8 7+6" 3 8 3+!8 2 3C . 2 3 9+ +.4+5 " 2 !24 4+23+!8 "! +259+!8 " 9 8 9+414+88 24 + " 3+!8 2 3 "! 5" C !"4 9+ 25 "!8 4 + 5 . 12! 5 12 " "! 9+ 25 "!8 52 8 . + 3+ 5 +8 " +D 3 C 52 "!8 "! 8"5 24 @"!A+!8 8 2! 2 !+ "!B @2D+ @9+ 9+6 !+24 I+ 92 +.4+5 928 3 D"!5+3 2 94+ 5 4 + 5+8 !"B 9+ 2 B8 " +3 52 " 92 9+ B288+8 " 6" 9 92D+ 4"8 9+ 927 " 2 3 !+81+5 "! 12! 5 12 " 2 3 92 1 74 5 "1 " 9!" .9 425A " !+81+5 8 C 2D"!274+ 2 3 3+1!+88 . " 9+ .+ +!24 81 ! " 1426 2B" . 6" 9 +B1 +3 !+ "!B " + 1!+5 1 2 +8 2 2 94+ 5 8 ! ..4+ 7+ @++ 9+ !+ "!B +!+8 8 2 3 9+ +!+8 8 5" !"4 " 9+ 2 94+ 58 " 7+ !+ "!B+3 " + 2446 "! 25 2446 9 8 8 ! ..4+ +J 8 8 3+! 24 5" 3 " 8 7+52 8+ " 9+ 5" !28 + 3+ 5 +8 7+ @++ 9+ @ " 1! B2!6 +!+8 8 5" +8 8 2 3 2 5"!!+C 81" 3 .5" !28 1 74 5 "1 " + @++ 9+ @ " 1! B2!6 +!+8 8 2 !2 8 " 24 B J !+ " 9+ @ " +J 8 8 @9 59 52 8+8 B "8 " 9+ 8 ! ..4+ 9+8+ 9!++ +!+8 8 . D+ 9!++ .+ +!24 5" C 5+1 8 " @92 2 94+ 58 .2!+ "! 2 3 @9"B 9+6 9+6 2!+ "! " @9 59 24 5 !!+ "1 " 8 2 3 2 3+8 !+ +! 2 3 @9 59 3+ +!B +24 1"4 5 +8 2 3 B+ 9"38 9+ 23B 8 !2 " "-4 2 94+ 58



B2 6 7"68 5"B+ !"B 2 5" 8 3+!274+ 3 8 2 5+ B2A+ 24B"8 B1"88 74+ 8 8 1" 2 6 92!3 2 3 28 ! 4+8 76 52!+ 446 !8 .' 859""4 "1 " 2 3 76 8++ .' 92 +D+!6 7"6 928 2 2 6 !2 +' 9+"11"! 6" 12! 5 12 .' 9+.2B+8 9+B"3+! 326 859""4 8 211!"J C B2 .' B"!+ 2 3 B"!+ 54"8+46 9 8 !+81+5 "' 9+1! 5 14+8" 9+1 74 5 859""48 9+ 5"B B+ 5+B+ "' 9+ 859""4 +!B 244 9+.2B+8 2!+ 1425+3 9+ 592!.+" 9+ 859""4 521 2 @9"' 8 28 2 ! 4+ 9+ 8+ "!5"4"!+!B2 .' 9+ 859""4 !"B 9+ +2B" 9+1!+D " 8 8+28" 9 9+ 288 8 2 5+" 9+" 9+!"43 5"4"!8 9+2!C !2 .+8 9+ @9"4+ 859""4 2 8+! +8 " .2B+8 @9 59 8 1"8 +3 2 " 5+" 9+ 859""4 " 5+ 7"2!3 259 .2B+ 928 8 211" +3 521 2 @9"' 8 9+ !+81" 8 74+" +259 326 @9+ .2B+8 2A+ 1425+ "!2!!2 . .' 9+8 3+8 "!9+ 326 6 7"6 @9"' 8 274+" 1426 2 3 928 ." 4+2D+" 7+ 278+ B 8 8 !A+" 9 8 2B+ 7+ "!+ 2 5+! 2 B+ 2 3 9 8 1425+ 8 44+3 + 9+!76 8+4+5 .' 2 1426+!' !"B 9+ +J .2B+ ?' 2 B+ 9"3 @9 59 D"4D+8 8"B+ 2!!2 .+B+ 7+ @++ 9+ 521 2 8 ?'"!' 8"B+ 528+8 76 B2A .' 9+.2B+8 24@268 5" 2 B"!+ 1426+!8 92 8 278"4 +46 +88+ 24 2 3 9 8 244"@ .' 2 B2!. "!3+ +5 " 8 !"B 9+ "1.2B+ 9+ 521 2 8+4+5 8 9 8 859""4 +2B" "!' +2B8 7"6 @9"' 928 7++ B 81425+3 9+.2B+8 928 "3 4 5 4 6 B2A .' 9+ B 8- 3.B+ A "@ F "!' @9+ "' 1426 .' 9+ 521 2 "' 9+ 859""4 2 3 9+E B+B7+!8 "' 9+ !8 .2B+ 2!+ 5" C 2446 3+! 2A .' 9+ 3 +8 "' !+ +!++ 9+4"@+!.2B+8 @9 4+2 8"B+ 859""48 B2 59+8 2!+ 1+! "3 52446 2!!2 .+3 7+ @++ 9+ 4"@+! 3 D 8 "' " 9+ 9 .9+!.2B+ 2 3 9+ 11+! 3 ED 8 "' " 9+ 4"@+!.2B+ "!3+!"' 3 8C 5"D+! 2 6 - 8 5+" 1425 .' 2 !2446 9+ B2 59+8 2.2 8 " 9+!859""48 2!+ 9+ +D+ 8 " 9+ 6+2! 2 3 +D+!6 + "! 8 B23+ 76 9+ 521 2 "' .+ ".+ 9+!' 9+ 7+8 8 3+ 9+ 859""4 52 1"3 5+ 9+ 859""4 B2 59+8 2!+ 8 2446 2!!2 .+3 "@2!3 9+ + 3 " 9+ 8+28" 8"' 92 76 B+2 8 "1!+4 B 2!6 54 7 B2 59+8 2 ""11"!C 6 B 26 7+ 2 "!3+3 " 7 3 .' 1 9+ 7+8 8 3+ 2D2 4274+ 928 7++ " 3 92 9+ 8 2 32!3 " 1426 9+ 4"@+!.2B+8 " 9+ 859""4 8 21 "' 4"8+ 1425+ @9+ 9 ! 6 7"68 "!8"' B+!+46 !+1+2 326 2 +! 326 9+ 82B+ 1+!C "!B2 5+8 2.2 8 +259 9+! 5" 8+R + 5+ 2 244 859""48 B2 59+8 " 8"B+ 8"! 92D+ 7++ !"3 5+3 ?' +!9" 8+"! +!54288 B2 59+8 "!' 8 2 5+' "!' 7"68 " 244 2.+8 2 3 9+ 82B+ "!' 7"68 3+! 2 5+! 2 2.+" "!' 3+! 2 5+! 2 859""4 .2B+ ?'2 3 " 9 .' 928 7++ " 3 B"!+ 8+ 4 92 9+8+" "!7! . ." "' " 5+ 1!"B 8 .' 6" .' 1426+!8 ! .' 9+ 8+28" 5"4"!8 2!+ 2@2!3+3 "' 9+ D2! " 8 +2B8 "!.2B+8 76 9+ 521 2 " 9+ 859""4 +" 9+ B28 +!8 8 24@268 1!+8 3+ 9+ .2B+8 5"B B ++7 9 8 5 " 8 2!+4 B +3 "' 23D 5+ 2 3 . 32 5+ 9+ R +8 " 9+ 2 5+8 " 859""4 .2B+8 8 D+!6 8 B14+ D+!6 7"6 @9"' 14268 .2B+8 1268 2 .2B+8 8 7C 85! 1 " 8 2446 D+!6 4 .9 9+ B" +6 8"

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1!"D 3+3 ".+ 9+!' @ 9 2 6 " 9+! 8" !5+ " !+D+ +@9 59 B 267+ 2D2 4274+ ?' "!' 8 2 5+ 9+ 1!" 8 " 9+ 859""4 S 89"1 T ?' 8 3+D" +3 "' 9+ 1A++1 " 9+ .!" 38 9+ 7"68 126 9+ !"@ +J1+ 8+8 !2D+4 .' "' 1426 " 9+! 859""48 2 3 "' .2 + B" +6 8 2A+ 9+ D+!8 +8 9+ .2B+8 2!+ ! " D+!6 8 B 42!4 +8 82D+ 92 9+ 3+!.!23 2 + 288 B+8 + !+ 25 D+ 5" !"4 " +259 7!2 59 "81"! E@ 9 "' 3"!B2 2 9"! 6 9+ 725AC .!" 3 259 7!2 59 8 2! 8 9+ 8+28" @ 9 8 5"B B ++ 5" 8 8 .' " 9+ 8+ "! 5"4"! 9+ 521 2 "!' 1!+8 3+ "!' 9+ 5 !!+ 6+2! 2 3 " 9+" 9+!' S 74 +8T !+B2 .' "D+!' !"B 9+ 1!+D " 8 8+28" ! 248 2!+ 2!!2 .+3 "!' 8 59 1426+!8 !+8 3+ 5+ 28 92D+ + 9+!' B23+ 9+ !' B2!A 1!+ED " 8 6+2!8 "!' 5" B+ !+89 E@ 9 !+1 2 " 8 !"B 9+ 859""48 6 B+2 8 " 9+8+ 2 3 9+ . 32 5+ 2 "!3+3 76 +!E 5" +.+ B2 59+8 9+ 521 2 2 3 5"B B ++ 59""8+ 9+ D+!8 6 +2B @9 59 2A+8 8 1425+ 2B" .' 9+ .4 89 54 78 2 3 8 .!23 2446 7 4 1 " 9+ 24 "!B @9 59 8 8+4+5 +3 "' 3"' 8+!D 5+ 9+ +! D+!8 6 B2 59 9+ 2 5 24 281+5 " D+!8 6 81"! 3 +!8 8"B+@92 !"B 92 " 9+ 859""48 D+!6 " +' @9"' !+1!+8+ 8 9 8 D+!8 6 1268 9 8 8 785! 1 " "' 9+ D+!8 6 4 7 @9 59 8 3 8 5 +259 528+ !"B 9+ "44+.+ 4 78 @9 59 1 !8 +' 9+ 82B+ 81"! " 9 8 3 2 3 9+ .2 +" B" +6 @9 59 8 2A+ 2 D+!8 6 J !+8 9+ 72!+ +J1+ 8+8 " +259 B+B7+!" 9+ +2B 2!+ 12 3 255"!32 5+ V@ 9 9+ !+. 42 " 8 " 9+ .4 89 " 8 28 "' 2B2 + !8B 76 25 2.!++B+ 2 9+ 1!+8+ B"B+ 2 1426+!' 24@268 4"8+8 2 4 4+ 9+ 5 3+ 24 +J1+ 8+8 " !2D+4 .' 9+!+ 2!+ "43 1426+!8 @9"' @" 43 1!+ +!' "' 8++ D+!C 8 6 B+ 126 .' 244 9+ !"@ +J1+ 8+8 7 E@ 9 9+ 2B" " " !2D+4 .' @9 59 1!+8+ E 326 2 94+ 58 + 2 4 928 7++ 5" 8 3+!+3 7+8 9+ +!+8 8 " 9+ .2B+8 9+B8+4D+8 2 3 "!3+! " "' 1!+D+ 9+ 7+8 24+ 2 9+ D+!8 6 12! 5 12 .' 9+ 81"! 8 "' 4+ 1426+!8 2D2 4 9+B8+4D+8 " 9+ 1!25 524 728 8 42 3 3"@ 76 9+ " 8 2 3 288"5 2 " 8 ++34+88 "' 826 9+ 4 B 8 ! . 346 "78+!D+3 2 3 9+ 255" 8 52!+ 446 B2 2.+3 76 B"!+ "! 4+88 1+!B2 + 9" "!2!6 8+5!+ 2! +8 9+ 2 C 2 !8 " 9+ D2! " 8 5"44+.+ 54 78 @ 9 9+ D+!8 +8 3 +!' "7D " 8 1" 8 "' .2 + B" +6 7+ .' 2D2 4274+ +D+!6 54 7 !+4 +8 " 8 B+B7+!8 8 785! 1 " 8 2 3 9+ D+!82 4 1!25 5+ 8 "!' 2 B3+!.!23 2 + "' 126 2 8 7C 85! 1 " "' 9+ 5"B7 +3 2 94+ 5 54 78 " 9 8 5"44+.+ 9+ 8 9+ + 4+3 "' 12! 5 12 + 2 6 81"! 9+ 528+ " +J5+1 " 24 +J1+ 8+ @9+ "!' 8 2 5+ 2 5"44+.+ 5!+@ 8 8+ "' 5"B 1+ + 2 + 4+6 2 8 785! 1 " 8 28 2 ! 4+ 81+5 2446 !2 8+3 9+ 5"44+.+ "' 3+ !26 12! " 9+ +J1+ 8+8 " 9+ B+B7+!8 " 9+ 5!+@

9+ 8 7-+5 " 2 94+ 58 9+!+ 8 C 3" 7 +346 2 9+ 1!+8+ B"B+ 2 5+! 2 3 D 8 " "1 .42 3 92 9+ 81"! " !' 859""48 2 3 D+!8 +8 8 85! 1 4" 846

54+2 2 3 9" +8 " +" "!2 B +3+ +8 "!2.2 3"+8 2 67"36 R +8 " 92 9+3 8 5 14 +" B 3 2 3 7"36 9 8 8+5 !+3 8 +J !+B+46 D24 274+ "!+D+!6 7"6 ?2 3 85 14 +7!" .9 "1426 " " 46 " 9+5! 5A+2 3 "" 7244 +43 7 248" 9+ @9"4+ B2 2.+ B+ 2 3 5" !"4" 9+859""4.2B+8 +D+!9+4+88 +D+ 2B" ." 9"8+ @9" .!2 244 9+8+5" + " 8 9+!+ 8 " + 2 !+24 ++4 ." +28 +88 @9 59 B26 7+2 ! 7 +3 28 2 ! 4+ "" +" " 9!++ 3+28 9+ !8 1425+ 9+!+2!+ 9"8+ @9" 2!+" " "1 " 92 9+ D ."!2 3 !5+" " 9+ 2 " B .9 7+ B 59 B"!+1!" 2746 +B14"6+3 9+8+ 3268 92 1288 " 2 +3+D" " " 2 94+ 58 9+6 9 A 4 4+" " 9+S B 33 +3 "2 T 2 3 9+ S 42 +4+3 ""4 T !+.2!3 9 8 74 3 + 9 8 28 B 28 8"B+ 9 . 2A " " B23 +88 2 3 1 " 846 9"1+ 92 " +326 9 8 2!3"! B26 2A+ 2 B"!+ B2! 24 2 3 12 ! " 5 ! 9+ 592!.+ 89" 43 " 7+42 3 1" 9+ 2 94+ +2 8 59 9+ .!+2 D"4 ++! B"D+B+ " " $>&# @+ 92 3 92 3 @ 9 2 D28 2 94+ 5 !+D D24 9+ @" @+!+!+.2!3+3 282 B .2 2 8 .4+"7-+5 2 3 " 46 9+ 2 94+ +2 @+!+ 28 5" D 5+3 " 9+!8+! " 8 1 !1"8+ " 9+ " +28 9+ 8 @ 9 !+.2!3 " 9+" 9+!+ @" 43 7+ " R +8 " "5" 4 5 .+!+8 8 +5" 346 9+!+ 8 2 B 59 B"!+- 8 274+ !+28" "!211!+9+ 8 " @ 9 !+.2!3 " 2 94+ 58 8 82 3 92 2 94+ 58 92D+ 7+C 5"B+ 9+3"B 2 .25 "!" 244" !+3 52 " 2 3 92 " 9+!+!+8 2 3 "55 12 " 8 2!+!21 346 ." " 9+ @244 92 9+!+ 8 ! 9 9 8 592!.+ B 8 "! 2 +46 7+23B +3 2B+8 2!+ +J5+44+ 9 .8 " 1426 7 @9+ 9+6 7+5"B+2 "78+88 " 7"68 5" D+!82 " 9+ !+8 4 8 3+14"!274+ "6 2 !+ 23B !+8 1968 524 B 59 B"!+ +28 6 92 +44+5 24 1"@+88 2 3 9+2 94+ +7 4A8 42!.+ 9 8 D +@F 8B244 @" 3+! 9+!+ "!+ 92 @ 9 244 9+ 8+4 " 2 94+ 5 3 8 5 " @9 59 8 32 .4+3 7+ "!+ 9 8 +6+8 9+ + 38 8"B+ B+8 "! "!.+ 92 2 9C 4+ 58 2!+ " 9+!+24 7 8 +88 "9 8 4 + +D+!C 9+4+88 9+ 32 .+! 8 !+5". I+3 2 3 8 " 8" 242!B .28 8 8"B+ B+8 244+.+3 "!2 1+!C D+!8 " 52 7+5"!!+5 +3 2446 8"B+ @" 43 B2 2 92 9+ B"3+! 9+!+2B+8 28 2 8+! " 8 12! " 859""4 4 + 8 3+8 !"6 .9+ 1! B2!6 1 !1"8+ "!@9 59 2 .2B+ +J 8 8 ? 9+1 !1"8+ " !+42J2 " 2 3 !+5!+2 " +!+ 2.2 @+ B 8 " 8"B+ +J + 14+23 . 4 6 9+ 8 !2 " 2 94+ 58 8 R + 2 !+24 9 . " 9+ " 9+!92 3 +D+ 2 592 .+ " "5C 5 12 " 8 !+5!+2 " F 2 3 B"!+"D+!7"68 3" .+ 3+!1!+8+ 5" 3 " 8 28 B 59 B+ " 81+ 3 !!+81" 8 746 28 B2 6 859""4B28 +!8 9 A 3+8 !274+

J2..+!2 +3 9+!+ "!+ 9" .9 9+ +!+8 2 94+ 58 B26 8"B+ B+8 7+ 9+6 +D+! 9+4+88 1+! "!B 2 5 " .4 89 859""4 4 +@ 9C " @9 59 9+ +3 52 " 24 B259 +!6 @" 43 8++B .!"8846 23+R 2 +" "!9+1!"3 5 " " 9+ 3+248 @9 59 2!+ +! 2 +3 9+6 92D+ 7+5"B+7" 3 91 @ 9 9+ 2 " 24 D ! +8 9+6 2!+ 12! " 4+ 2 " 24 4 + ++ 2! 54+8 " 9+ !+81+5 D+ .4 89 C D+!8 +8 2 3 74 5 59""48

"44+.+ 94+ 58 ? 94+ 58 "55 16 2 D+!6 42!.+ 1425+ 9+4 +" B+! 52 5"44+.+ 8 3+ 8 "E326 @9+ / @+ 5" 8 3+! 92 9+ !8 +!5"44+. 2 +5" +8 9+ +3 2 +8 @28 2 7"2 !25+ 7+ @++ 2!D2!3 2 3 24+ $>PQ "44+.+ 2 94+ 58 28 @+ 92D+ 9+B "C 326 2!+ 3 D 3+3 "! B2-"!81"! 8 !"@ . 728+7244 "" 7244 2 3 !25A 2 94+ 58F 2 3 27" 2 3"I+ B "!81"! 8 728A+ 7244 425!"88+ 8"55+! 5! 5A+ + 8 ."4 8@ B B . @2 +!1"4" .6 BC 28 58 + 5 . @!+8 4 . 7"@4 . 2 3 89"" C .

9+ B2-"!81"! 8 2!+ 9+ "43+8 !"@ .32 C .725A "! $>PQ- 728+7244 "! $>P<" "" 7244 "4 9+2!46 8+D+ +8 2 3 !25A 2 94+ 58 "! 9+42 +8+D+ +8 "8 " 9+ B "!81"! 8 @+!+ !"3 5+3 3 ! .9+ 3+523+ !"B $><# "! $<## 9+ .!"@ 9 " 2 94+ 58 9+ 5"44+.+8 @28 !2 9+!84"@ !"B $>PQ "27" $>>#7 9+23D+ " !25A 2 94+ 58 2 3 "" 7244 233+3 +@ B1+ 8 "! 9+ B"D+B+ + "!+ $>>#9+ B+ 9"38 " 5" 3 5 .2 94+ 58 @+!+ 8 B14+F 9+!+ @+!+ "! 8242! +3 5"259+8 "! !2 . 274+8 2 3 +427"!2 + "!B8F 9+ +J1+ 8+8 @+!+ 8B244 2 3 9+6 @+!+ 12 3 B"8 46 76 9+ 12! 5 12 8 9+ 81"! 8 +!$>>#9+ 2 + " . D+ "! 2 94+ 58 5!+28+3 !21 346F +427"!2 + B+ 9"38 " !2 .@+!+ 3+D+4"1+3 +J1+! 5"259+8 @+!+ + .2.+3 "!+2B8 B2 6 +@ 81"! 8 @+!+ 2A+ 1 2 3 9+ B7+!" 8 3+ 8 2A .12! 9+B @28 B 4 14+3 9+5"8 " B2 2 .2 94+ 58 5!+28+3 1!"C 1"! " 2 +46 9+8 3+ 8 +!+8 +3 2 94+ C 58 2 4+3 "! 8+5 !+ 2 5 24 8 11"! !"B 9+ 5"44+.+ 38 2 3 D+!6 8"" 4+2! +3 92 38 5" 43 7+ 8+5 !+3 !"B .2 + !+5+ 1 8 2 3 + C 9 8 28 5 24 B 9+6 248" 4+2! +3 !"B +J1+! + 5+ 92 9+ 1 74 5 2 3 9+ 24 B @" 43 . D+.+ +!" 8 8 11"! "@ .+2B8 7 @" 43 8"" @ 93!2@ 9+ ! 8 11"! !"B 4"8 .+2B8

92 8 2 " @28 3" 7 +346 2 42!.+ 25 "!" 7! . .27" 2 !23 524 592 .+ 9+ 592!25 +!" "5"44+.+ 2 94+ 58 9+ "43 5" C 5+1 " "8+5 ! .9+24 9 4 1968 524 25 D 6 @9"4+8"B+ !+5!+2 " 2 3 ! + 346 5"B 1+ " "!244 8 3+ 8@28 8 1+!8+3+3 76 9+ +@ 3+2" 825! 5 .+D+!6 9 .!" 9+ 82A+" ! ." " 2 @ .+2B 44 9+ +D 48" 1!" +88 " 24 8B !+5! .+ +.4+5 " 8 3 +8 7! 24 6 +J !2D2C .2 5+ + 5 92 92D+ +J 8 +3 3 ! .9+ 428 @+ 6 6+2!8 2!+ 9+ !+8 4 3 !+5 46"!" 3 !+5 46 " 9 8 "!3 2 +3+8 !+ "@ 2 2 6 5"8 7+C 52 8+ 2 @ .+2B 8 !+8 2 5 24 8 55+88 9+2 24 !+5+ 1 8 !"B 23B 88 " 8 ".2B+8 +259 " 8+D+!24 5"44+.+8 2B" " B"!+ 92 " + 9 3!+3 9" 82 3 3"442!8 2 3 !"B 2 8 .4+ "" 7244 .2B+ "28 B 59 28 8+D+ 6 9" 82 3 3"442!8 9+ + +5 " 8 59 2 1"4 56 1" 9+ 8 3+ 8@28 3 8 5 46 92!B 4 9+ +J2..+!2 +3 B1"! 2 5+ 1425+3 1" @ . 4+3 " 8 59 2 3+.!++ " 81+5 24 I2 " 2 94+ 58 92 " 46 B+ " +J5+1 " 24 27 4 6

Q0=

5" 43 +2! 2 1425+ " 9+ +2B8 B+ +J5+1 " 24 27 4 6@+!+ " " 3 9+8 3+ 7"36 9+6@+!+!+5! +3 !"B 9+ " 8 3+ 76 " +! 9+B 3 5+B+ 8 9+ "!B " 859"42!89 18 "! 1"8 " 8 @ 9 4 .9 @"!A 2 3 42!.+ 126

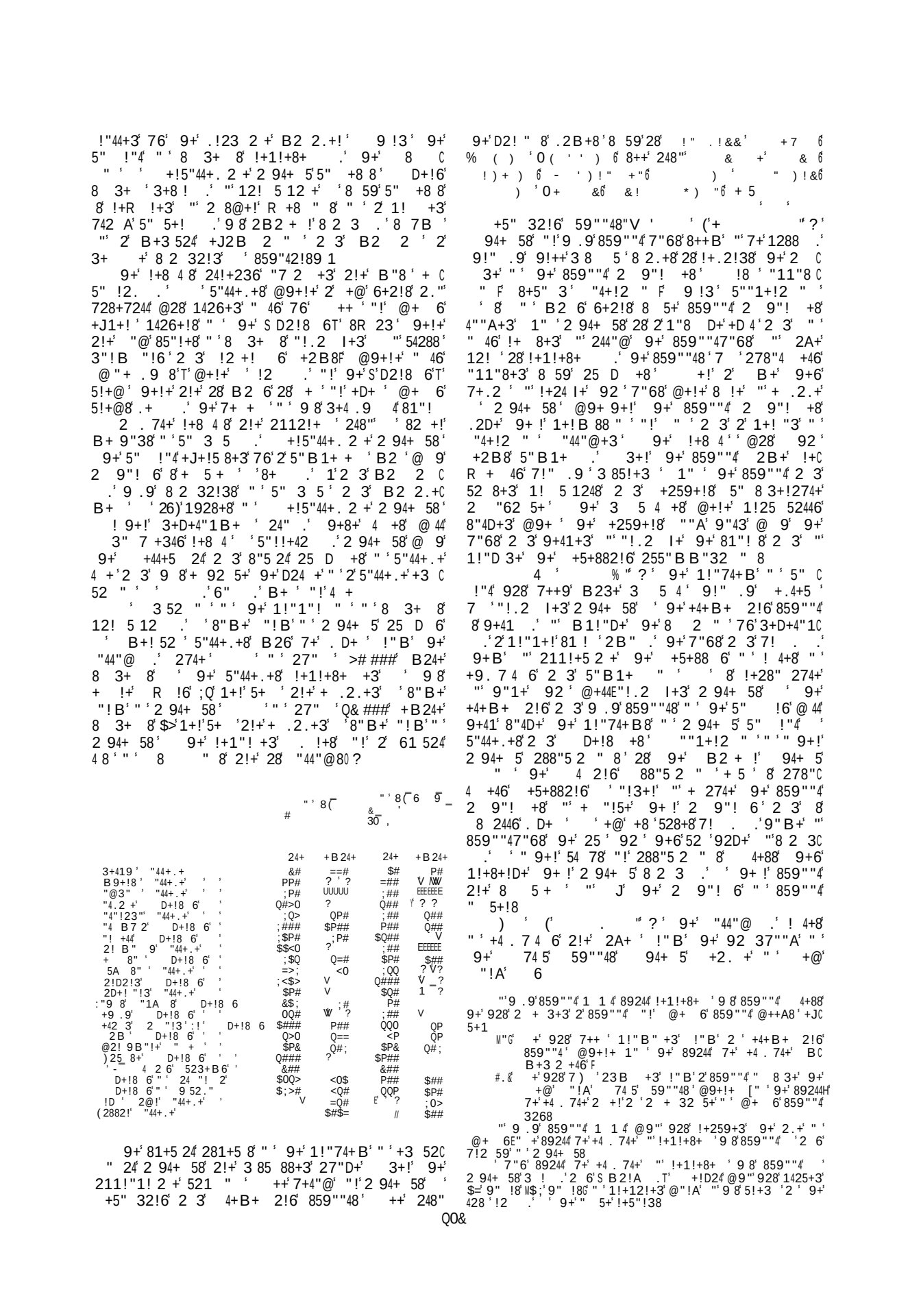
+ " 9+ .!+2 +8 3+ +5 8 8 92 9+ 5"44+.+ +R 1B+ "!+J+!5 8+ 8 B" "1"4 I+3 76 9+ +2B8 @ 9 9+ !+8 4 92 9+ B2 7"36 " 8 3+ 8@9"" ++3 9+ +J+!5 8+ B"8 B 5" C + 9+B8+4D+8 @ 9 9+ +J+!5 8+ D"4D+3 S!"" .T "!+ 9+ +2B8 9+ 2B" " " B+ 2 3 + +!.6 !+R !+3 " 9+ 2 94+ +8 8 8"" .!+2 92 B2 6" 9+B 2!+ 274+ "" B2 2 82 8C 25 "!6 2523+B 5 8 2 3 . 9+ 8 2 32!38 " +J !2D2.2 4 D . 9+ +@8121+! " "! + 6 2 3 9+ 9+!"E@"!89 1 + -"6+3 76 9+ 8 55+88 4 2 9C 4+ +8 3 ! .9+ !2 + 5 52!++! 4+2D+ 9+B 2 +! .!23 2 " @ 9 +J !2D2.2 927 8" 4 D . " 255"!3 @ 9 9+ ! 2 5 24 2 3 8"5 24 1"8 " " 9+! B"8 "! 2 +!+8 4 " 1425 . C 3 +B1928 8 1" @ . 2 94+ 5 5" +8 8 8 9+ 1!25 5+ " .2B74 . 1" 9+ " 5"B+ " 9+ .2B+8E 2 6 8 3+ 8 25R !+ 9+ .2B74 .927 @9 4 3+! 9+ 4 + 5+ " 9+ 968 +! 524 +J5 +B+ "D+! 5"44+.+ 2 94+ 5 5" C +8 8

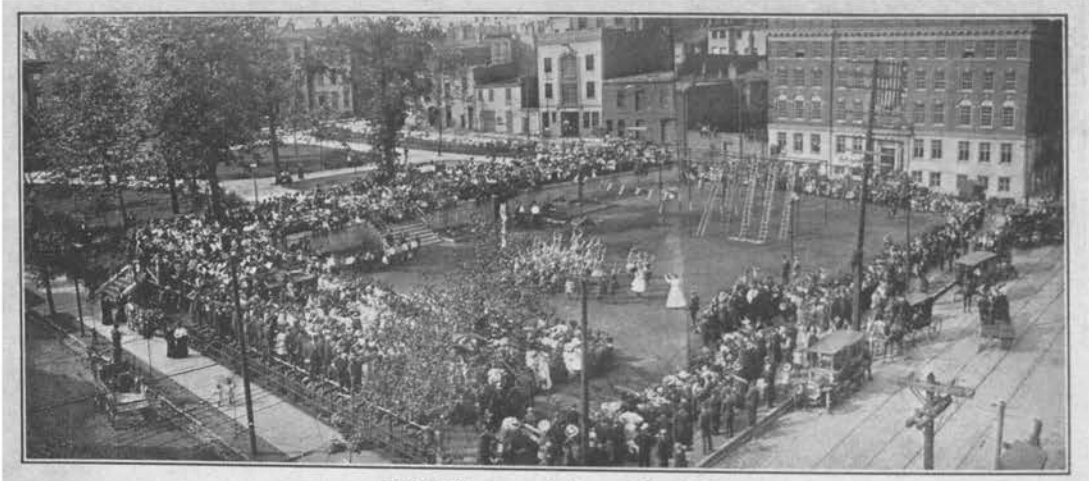
9+8+ +D 48 +J 8 D2!6 .3+.!++ B2 6 5"44+.+8 9+6 !+259+3 2 54 B2J 3 ! .9+ 1+C ! "3 !"B $<## @9 8 2 "2 @28 !+D+24+3 9!" .9 3 85 88 " 9+ 1 74 5 1!+88 9+ 3+2 9 " 2 5"44+.+ 8 3+ 3 ! .2 "" C 724 .2B+ 2 3 9+ !+1"! 8 " 2 42!.+ B7+! " 8+! " 8 - ! +8 "" 7244 1426+!8 1!+5 1 2 +3 2 @ 3+81!+23 " 5!6 "!+ "!B 5" +!+ 5+ " !+1!+8+ 2 D+8 !"B 2 9+ 5"44+.+8 2 3 C D+!8 +8 @28 5244+3 +@ "!A $<#P "" 5" 8 3+! 9+ 1!"74+B8 " 2 94+ 5 !+ "!B +D+ 6 8 " 8 !+81" 3+3 76 8+ 3 . " 5 24 3+4+.2 +8 9+ !+8 4 " 9 8 5" +!+ 5+ @28 9+ "!.2 I2 " " 9+ +!5"44+. 2 + 94+ 5 88"5 2 " "9+ +3 2 +8 9+ 1"4 56 23"1 +3 76 9+ 288"5 2 " @28 " C 8 + 2 52 B12 . " 2 94+ 5 23C B 8 !2 " 9!" .9 2 24 5" +!+ 5+8 5"B C B ++ !+1"! 8 3 85 88 " 8 2 3 1 74 52 " 9+ !+8 4 8 9 8 2! 255"B14 89+3 2!+ B"8 + 5" !2. . 9+ +D 48 " 1!" +88 " 24 8B 1!"8+46 . +J !2D2.2 +J1+ 3 !+8 9+ !2 . 274+ 2 3 "" 4" .859+3 4+8 " .2B+8 92D+ 7++ .!+2 46 4+88+ +3 9+ 1426 .! 4+8 " "" 7244 92D+ 7++ B1!"D+3 2 3 1!"D 8 " B23+ "!B "!+ + 5 + " 5 248 " 5" 3 5 9+ .2B+8

" 9+!D+!6 B1"! 2 !+8 4 " 9+ 1 74 5 6 . D+ " "1!"74+B8 " 2 94+ 5 !+ "!B 8 2 44+! !+24 I2 " 76 5"44+.+ 2 9"! +8 " 9+ !!+81" E 8 7 4 6 5"!!+5 .+J 8 .+D 48 9+ 5" C D 5 " 8 .!"@ .2B" .5"44+.+ " 5 248 92 2 94+ 58 @9+ 1!"1+!46 5" 3 5 +3 5" ! 7 + "" 9+ 1968 524 B"!24 2 3 8"5 24 3+D+4"1B+ " 5"44+.+ 8 3+ 8 "!3+! 92 8 59 !+8 4 8 B26 7+ "7 2 +3 2 94+ 58 B 8 7+ 23C B 8 +!+3 B 59 9+ 82B+ @26 28 " 9+! 7!2 59+8 " +3 52 " 8 +5+882!6 " 25C 5"B B"32 + 244 9+ 8 3+ 8 9+ 8 " 8 8 248"" +88+ 24 "" 211" 2 3 !+5 "!" "! B2 2C .+!" "" "!.2 I+2 3 3 !+5 9+2 94+ 5 25 D +8 "44+.+ 2 94+ 58 2!+ "@ 1288 .9!" .9 2 1+! "3 " !2 8 " 9+!+ 2!+ 9!++ 3 8 5 1"4 5 +8 23D"52 +3 76 3 +!+ .!" 18 +!+8 +3 9+ 1!"74+B 9+ 6" .+! 24 B M12!C 5 42!46 9"8+ @9"" @+!+! 1!"B + 2 94+ 58 @9+ 3+!.!23 2 +8 8" B+ " 9+ 3+!C .!23 2 +8 9+ S 81"! .+4+B+ >" 9+ 1 74 5 2 3 9+ 42!.+ B7+! " 7 8 +88 B+ @9"" !+1!+8+ 9+ !2 81"! 2 " 9" +4 2 3 " 9+! +!+8 8 92 3+! D+ 2 5 24 7+ + 8 !"B 2 94+ 5 5" +8 8 23D"52 + 9+ 1"4 56 " 4 ("@2!3 5"B B+!5 24 I+3 2 94+ 58 8B244 .!" 1 54 3 .8"B+ 5"44+.+ " 5+!8 2 +@ " 9+ "43+! 24 B 2 3 8"B+ 12!+ 8 " 5"44+.+ 8 3+ 8 2A+ 9+ "11"8 + D +@ 2 3 23D"52 + 9+ 1!"9 7 " " 244 +!5"44+. 2 + 2 94+ 5 5" +8 8 9+ B2-"! 6 " 5"44+.+ " 5+!8 2 42!.+ 1!"1"! " " 24 B B2 6 3+!.!23C 2 +8 2 3 9+ B2-"! 6 " 9+ ! 12!+ 8 23D"C 52 + B"!+ +3 52 " 24 2 94+ 58 "!) + B288 " 8 3+ 8 2 3 9+ 52!+ 4 8 1+!D 8 " 2 3 5" !"4 " +!5"44+. 2 + 2 94+ 58 76 5"44+.+ 2 9"! +8 92 9+ 23D"52 +8 " 9 8 1"4 56 2!+ B+!" 8 2 3 4 + 24 8 +D 3+ 5+3 76 9+ 1!+8+ !+ 3 " 5"44+.+ 2 94+ 58

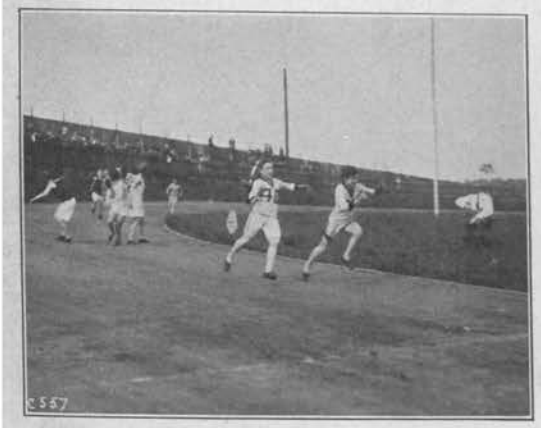
$<#P 5"44+.+ 2 94+ 58 @+!+ 5" !"44+3 24C B"8 + !+46 76 8 3+ 8 2 3 24 B 3+!+ 9+ 8 1+!D 8 " " 2 2 94+ 5 7"2!3 B23+ 1 " 2 B "! 6 " 25 4 6 B+B7+!8 2 3 2 B2-"! 6 " 24 B 2 3 3+!.!23 2 +8 5+ $<#P 2 .!23 24 592 .+ 928 2A+ 1425+ B+ 9"38 " "!.2 I2C " 2 3 5" !"4 9+ 2 B8 8" .9 76 9+ D2! " 8 5"44+.+8 2 3 D+!8 +8 2!+ +88+ 2446 9+ 82B+ " " + 5" !2.+ 2 3 3+D+4"1 !2C B !24 2 94+ 58 "! 9+ B288 " 8 3+ 8 " 5 ! 2 4 2 3 5" !"4 +!5"44+. 2 + 2 94+ 58 76 211" .2 3 !+5 "! "! B2 2.+!" 2 94+ 58 !+81" 8 74+ " 2 3 12 3 76 9+ 5"44+.+ 2 9"! C +8 9+ 8B244+! 8 " 8 9 8 !+81" C 8 7 4 6 8 . D+ " 9+ .6B 28 B 3 !+5 "! 7 B2 6 " 9+ 42!.+ 5"44+.+8 2 3 C D+!8 +8 2 .!23 2 + B2 2.+!" 2 94+ 58 8 211" +3 " . D+ 244 9 8 B+ " 9+ @"!A 3+! 9+ 3 !+5 " " " 9+ 1!+8 3+ "!2 81+5 24 5" B C B ++ 211" +3 "!" 9+ 1 !1"8+

9+ 1!"74+B " 5" !"44 . +!5"44+. 2 + 2 94+ 58 54 3+8 9!++ 12! 8 !8 9+ 5" C !"4 " 2 5+8 ? 9 8 8 255"B14 89+3 76 !+C R ! . B2 2.+!8 " 2 94+ 5 +2B8 " 8 7B 7 3.+ 8 2 9+ 7+. .""9+ 8+28" F "" !3+! 244 8 114 +8 " " 5 24 "!3+! 84 18F "" 126 2 7 448 76 59+5A 2 "!3+! 84 18 2 3 59+5A8 "" 7+ 5" +!8 . +3 76 9+ .!23 2 + B2 2.+!F 2 3 " !+R !+ 2 3+ 2 4+3 2 5 24 !+1"! 2 9+ + 3 " 9+ 8+28" +5" 3 9+ 5" !"4 " 2 94+ 5 1"4 56F 859+3 4+8 " 5" +8 8F 278+ 5+ " 8 3+ 8 !"B 2523+B 5 +J+!5 8+8 "!+ 9+ 1 !C 1"8+ " 2 94+ 5 !2 .2 3 5"B 1+ " F 21C 1" B+ 8 1+!D 8 " 2 3 3 8B 882 " +BC 14"6+3 5"259+8 2 3 !2 +!8F 2 3 9+ 52!+ 2 3 B2 + 2 5+ " 5"44+.+ 1!"1+! 6 8+3 "!2 9C 4+ 5 1 !1"8+8 ? 2 9+8+ B2 +!8 2!+ 5" E



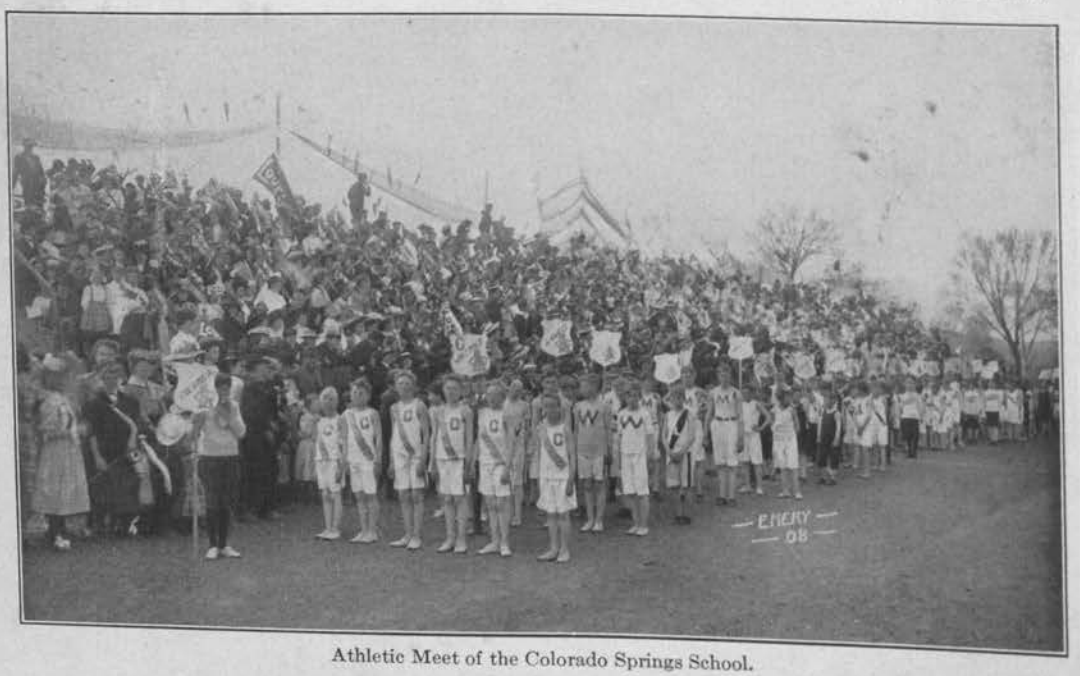


Public Playground, Jersey City, N.J.



Relay Race, Elementary School Boys.

Cross Country Run, New York City High Schools.



Athletic Meet of the Colorado Springs School.

. ? 9"8+9 .9859""48@9+!1968 524 !2 . 8 " 5" 3 5 +3 255"!3 . "9+ 86427 8 $; 9" !8 8 +23 " $= 8924 7+ 5" 8 3+!+3 28 5" 8 . +4 . 7 6

? !2@ . 2 3 89"1@"!A B2 2 !2 . 859""48 89244 5" " +9" !" !" @"

6 +J !2"!3 2!6 528+ 89244 7+ 8 7B +3 " 9+ 9 .9 859""48 2B+8 "BB ++

.!23 2 +" 2 9!++6+2!8 5" !8+ 9+9 .9 859""48 @9" !+ ! 8 " 2A+ 1 1"8 .!23 2 +@"!A 8 1+!B +3 " 2A+12! 2 94+ 58 1!"D 3 .9+ 8+4 . 74+255"!3 . " 9+! 4+8" 9+ 74 5 59""48 94+ 5 +2. + " 1 1 @9" 8 2 .!23 2 +" 2 " !E6+2!8+5" 3206 859""4 5" !8+ 89244 7+ +4 . 74+ " !+1!+8+ 2 6 859""4 46 9"8+1 1 48@9"2!+ 2A . 44@"!A 2!+. 42! 5" !8+ 89244 7+ +4 . 74+ " 9+ 859""4

" 1 1 4 89244 7+ 244"@+3 " 5"B 1+ + 9+ B 4+! 4+88 9+ 928 !+259+3 9+ 2.+ " 8 J ++ 6+2!8 2 3 8 J B" 98 " 1 1 4 89244 7+ 244"@+3 " 5"B 1+ + 9+ - "!+D+ 8 9+ 8 8 J ++ 6+2!8 "43 "!"43+! 7 ! 9 5+! 52 + 89244 7+ 255+1 +3 28 1!"" " 2 9 .9 859""4 - "!!8 2.+ 8 59 5+! 52 + 52 " 7+ 8+5 !+3 " 9+!+D 3+ 5+ B 26 7+ 8 7B +3 " 9+ .9 59""48 2B+8 "BB ++

6 7"6 @9" 928 B2 ! 5 42 +3 2 6 5"44+.+ "!@9" 928 1426+3 " 2 5"44+.+ +2B 89244 " 7+) . 74+ " !+1!+8+ 2 9 .9 859""4

" + !6 89244 7+ 255+1 +3 4+88 5" +!8 . +3 76 9+ 1! 5 124 "!" 9+ 859""4!8 !+1!+8+ 2 D+" 9+ .9 59""48 2B+8 "BB ++

6 9 .9 859""4 1 4 A "@ " 92D+ 7+ "!" 25 +3 28 2 2.+ "!" 9+!8 7+ ." 2 94+ 5 5" +8 8 89244 7+ 3+72!!+3 !"B 5"B 1+ " "!" +6+2!

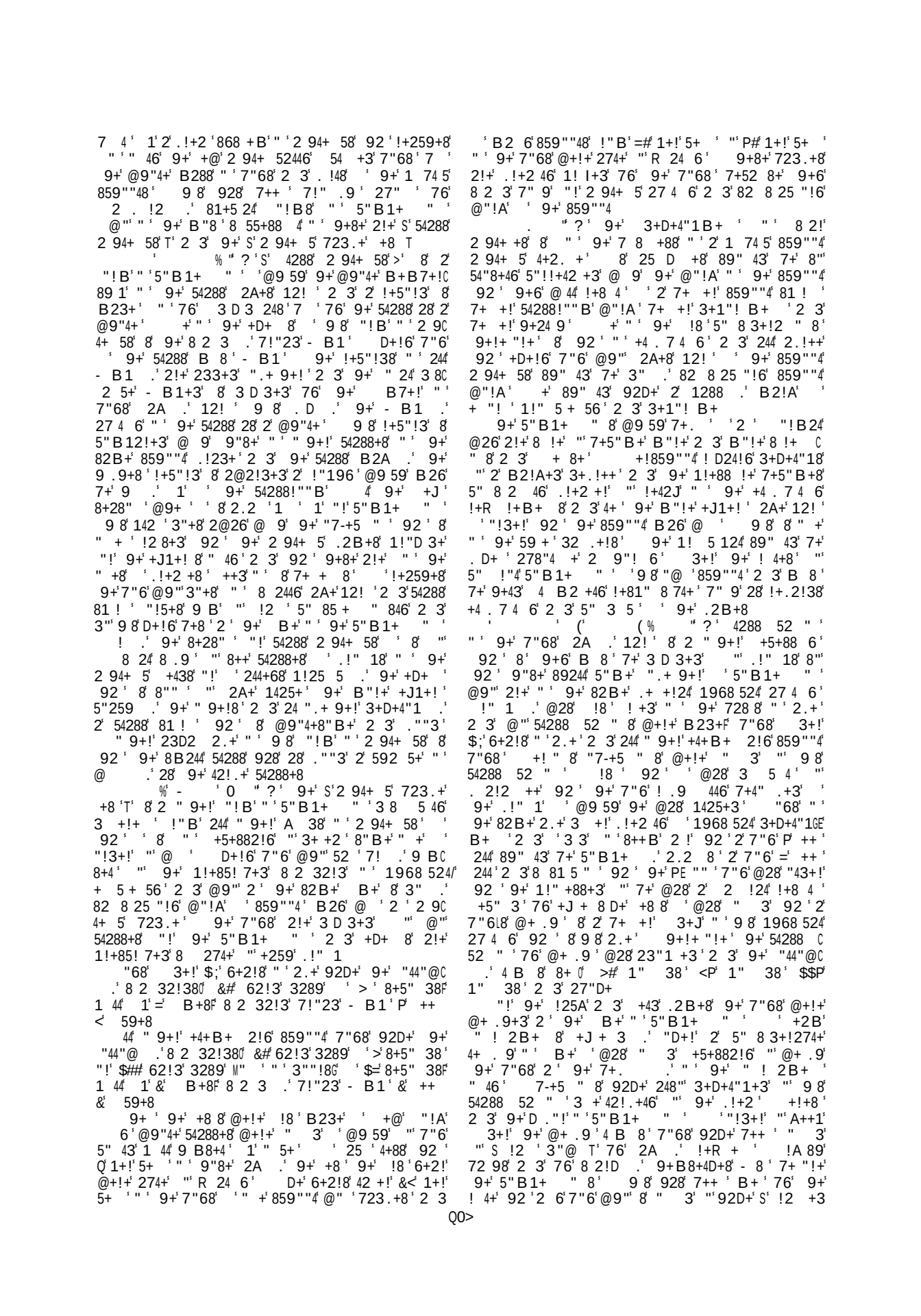
( ) " ? 9+ 8+5" 32!6 859""48 9+ +D+ 8 2!+ .!23+3 " 2 142 8 B 42!" 92 9+ +4+B+ 2!6 859""48 2 3 2 4 B 8 1425+3 1" 9+ B7+!" +D+ 8 @9 59 2 7"6 B26 + +! 4 7"68 2A .12! 9+ +!859""4 5"B1+ " 8 2!+ !+R !+3 " 1!+8+ 2 5+! 52 + 8 . +3 76 2 !+4 274+ 1968 5 2 8 2 92 9+6 2!+ 1968 52446 274+ " 12! 5 12 + "! 8 B23+ " +4 B 2 + !"B 9+ 4 8 " +D+ 8 9"8+ 92 1!+8+ 2 6 32 .+!" 8+! " 8 - !6 " 9+12! 5 12 8 8 2 +J2B14+" 9 8 "" 7244 3+!5"44+.+ ! 4+8 928 7++ 3 85" !2.+3 76 9+ +2. + +@ "!A 6 8"55+!" "" 7244 8 1426+3 28 2 8 78 + 9+ .2B+ " 8"55+!" 8 !++ !"B 9+ 32 .+!8 " B288 14268 2 3 25A4+8 2 3 " +!8 2 "11"! 6 "! 244 7"68 " 2A+12! 9+8B244 7"6 928 2 +R 24 592 5+ @ 9 9+ 42!.+! +44"@8 25 9+ 8 !+R + 46 274+ " 1426 9 8 7 4A6 "11" + ? 9+ .+ +!2446 255+1 +3 +D+ 8 "! 8+5" 32!6 859""4 7"68 2!+ $## 62!3 3289 QQ# 62!3 ==# 62!3 >># 62!3 $ B 4+! $## 62!3 9 !34+8 $Q# 62!3 9 !34+8 QQ# 62!3 9 !34+8 924 B 4+ 2 3 B 4+ !+4268 ! .7!"23 - B1 ! .9 .9 - B1 1"4+ D2 4 .1 .$Q 1" 3 89" 3 85 8 9!"@ 728A+ 7244 728+7244 8"55+!" "" 7244 5!"88 5" !6 ! .+ 8 8@ B B .8A2 . B2!A8B2 89 1

" ? B" .9+ "7-+5 " 8 92 2!+ !2 8+3 2.2 8 2 94+ 58 "! 859""47"68 2!+ 9+ "44"@ .0 D+!8 !2 2 !5 25 58 " " B 59 1 74 5 6 2 3 " " B 59 B+ 2 3 2 + " 9+ " 9+! 8 3+ 9+!+ 2!+ 1"8 D+ 23D2 2.+8 " @+44E"!.2 I+3 2 94+ 58 8 59 28 9+ 3+D+4"1B+ "5" !2.+ 3+5 8 " 24+! +88 + 25 6 !+8" !5+ "7+3 + 5+ !+8 !2 2 !0 +88 5""1+!2 " 8+4 E825! 5+ 2 3 .+ +!2489 1 9+ " 4""A 8 +J5++3 .46 9"1+ 4 7+52 8+ 9+ 23D2 2.+8 8" B2 +8 46 " @+ .9 9+ 3 823 D2 2.+8 2 3 7+52 8+ 3+! 2 @+44E"!.2 I+3 868 +B 9+ +D 48 B26 7+ 1!25 52446 +4 B 2 +3 4+B+ 2!6 59""48 ? 0 !.2 I+3 "! 9+ 1 !1"8+ . D .2 94+ 58 2 1!"1+!1425+ " ! 859""48 T 8 9+ !+28" . D+ 76 9+ !+8 3+ " 9+ 74 5 59""48 94+ 5 88"5 2 " " +@2!A : "!9+ "!B2 " "9 8 88"5 20 " 0 "3+D+4"1 9+ !2 " 24 25 D +8 " 9+ 7"68 2 3 .!48 T 8 2 " 9+!8 . 52 R "0 2 " !"B 9+92 37""A " 9+82B+"!.2 I20 " 9+ 3+542!2 " " 1 !1"8+ 8+ "! 9 76 9+ 74 5 59""48 94+ 5 +2. + " +@ "!A 6 8 S " 1!"D 3+ 9+24 9 4 -"6" 8 2 3 5" 8 ! 5 D+ 1426 "4A 32 5 . 2 3 2 94+ 58 "!+D+!6 7"6 2 3 .!4 T

59""4 1! 5 1248 +259+!8 2 3 7"2!38 " +3 52 " 2!+5"B . "!+29I+ 92 8 .!+2 46 " 9+ !23D2 2.+ 28@+44 28 2 B2 +!" 8 B14+ - 8 5+ " 5""1+!2 + @ 9 9+ 1 1 48 9+ ! 2 94+ 5 25 D +8 D 3+ 5+ " 9 8 8 9+ "!B24 "!.2 I2 " " 1 74 5 859""48 2 94+ 5 4+2. +8 9+ "4 "@ .5 +80 24 B"!+ 3 !B .92B 42 24" 5 2 9 " 4+D+42 3 9 " 597 !. 288 2 828 6 " +@2!A : +@ !4+2 8 2 +@ "!A 87 !. 2 25 + 8 2 !2 5 85" 24 +2 4+ 289 1! . +43 288 6!25 8+ 25"B2 289 !"6

0 - ! J ; "? 5+ 9+@"!A +@ "!A 6 8 61 524 " @92 8 7+ .3" + 9!" .9" 9+ @9"4+5" !6 8"B+!+ +!+ 5+ " 2 3 3+D+4"1B+ B26 7+ "!3+! 9+ !8 8 +1 @28 9+ "!B20 " " 2 D"4 2!6 "!.2 I2 " 76 859""4B+ 2 3 5 I+ 8 +!+8 +3 9+41 .7"68 9+ !2 94+ 5 81"! 8 9+ 9+ +J + 8 " " 9+ @"!A 8" 92 9+ .!+2 B288 " 7"68 2 3 . !48 @+!+ !+259+3 2 3 2446 " 5 24 !+5". " 76 9+ 859""4 2 9"! +8

$<#; 9+ !+5 "!" 968 524 !2 ." 9+ +@ "!A 1 74 5 859""48 ".+ 9+!@ 9 9+ 3 52 " 1! 5 1248 2 3 " 9+!1 74 5E81 ! +3 5 I+ 8 B+ " 5" 8 3+!@92 B .9 7+3" + 1!"D 3+ "11"! 6 "! @9"4+8"B+ 2 94+ 58 "!7"68 9+1 7 5 859""48 "44"@ .9 8 2 B++ ." 1! 5 1248 @28 9+43 2 @9 59 2 3+ +142 "!9+ "!.2 I2 " " 2 4+2. + @28 1!+8+ +3 9+ 1!"1"8 " B+ @ 9 .+ +!) 211!"D24 24 9" .9 8"B+ @+!+ 8A+1 524 27" 9+ 1"88 7 4 6 " B2A . 8 55++3 "!3+! 7! . 9+ B2 +!7+ "!+ 9+1 74 5 2 3 9+ 859""47"68 9+B8+4D+8 2 8+ " .2B+8 "! 24 9+ 859""48 " 9+ 5 6 @28 9+43 23 8" R 2!+ .2!3+ @28 76 2! 9+ 42!.+8 2 94+ 5 B++ 28 !+.2!38 9+ B7+! " 5"B0 1+ "!8 92 923+D+! 7++ 9+43 "B+ $P## 7"68 ""A 12! 9+ 8 24 !25A 2 3 +43 +D+ 8 8 59 28 9+ P# 2 3 $## 62!3 3289+8 !+426 !25+8 7!"23 - B1 .9 .9 - B1 2 +B1 +3 2 92 B+ !"B 92 7+. .9+!+ 928 7++



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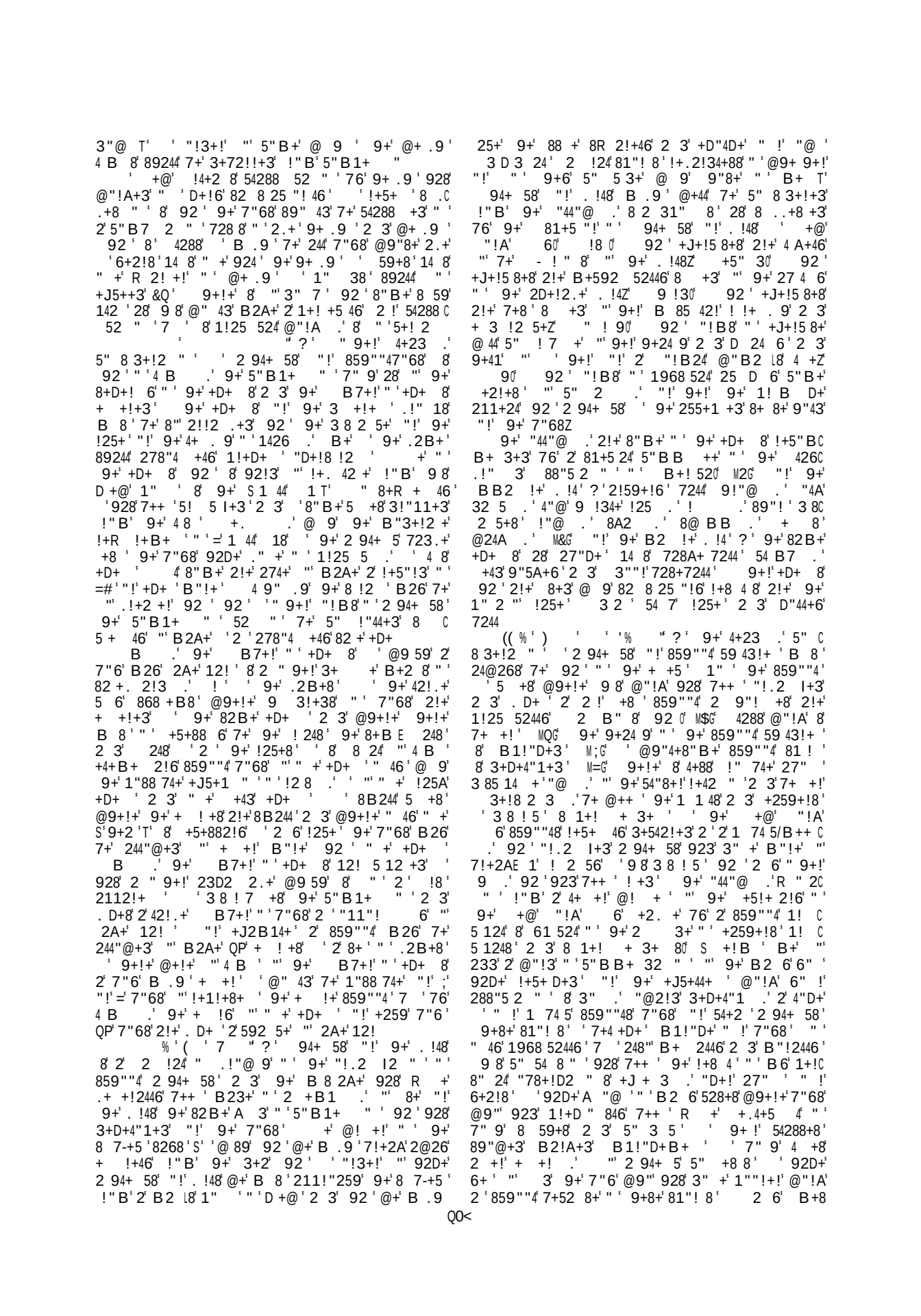
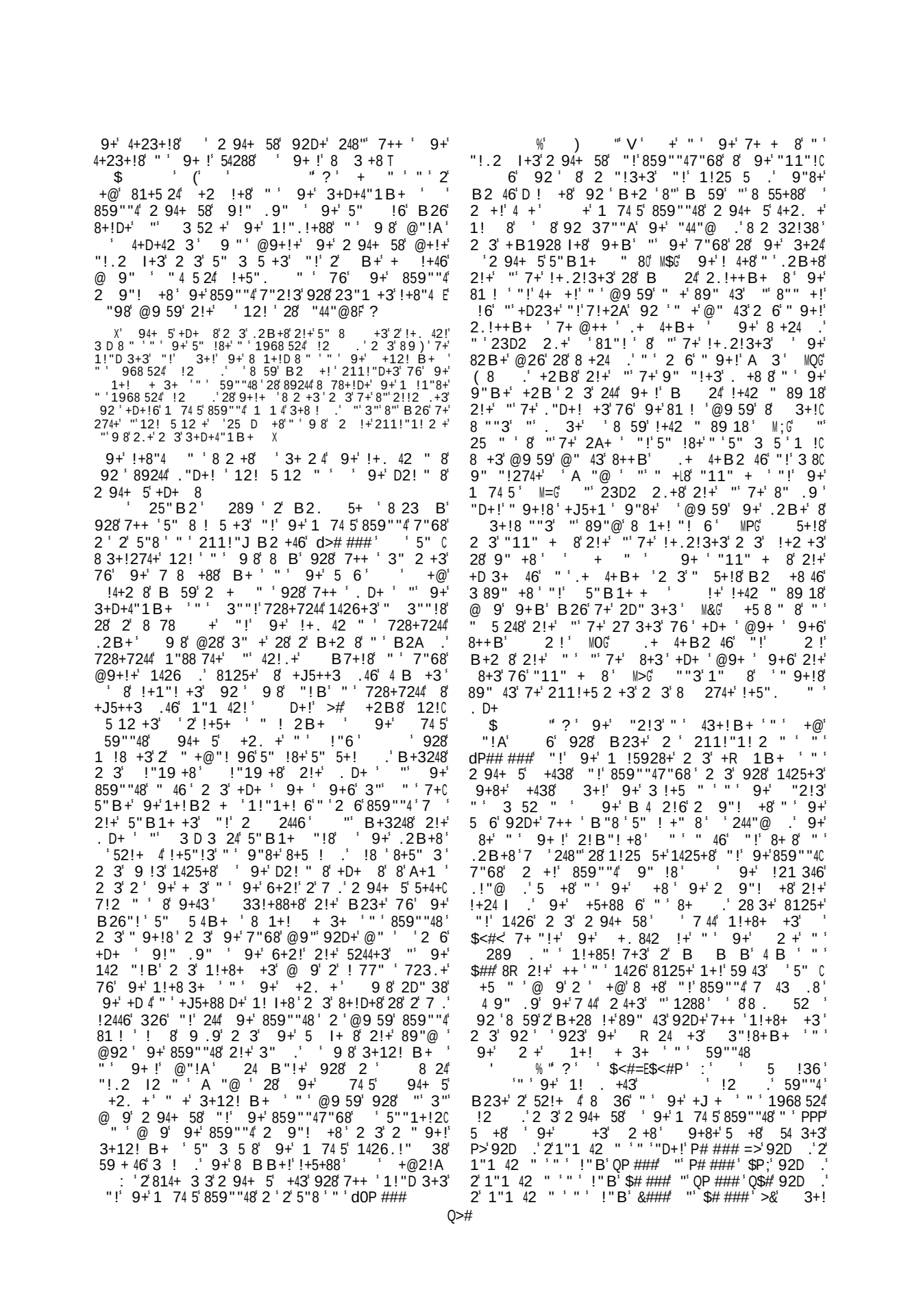
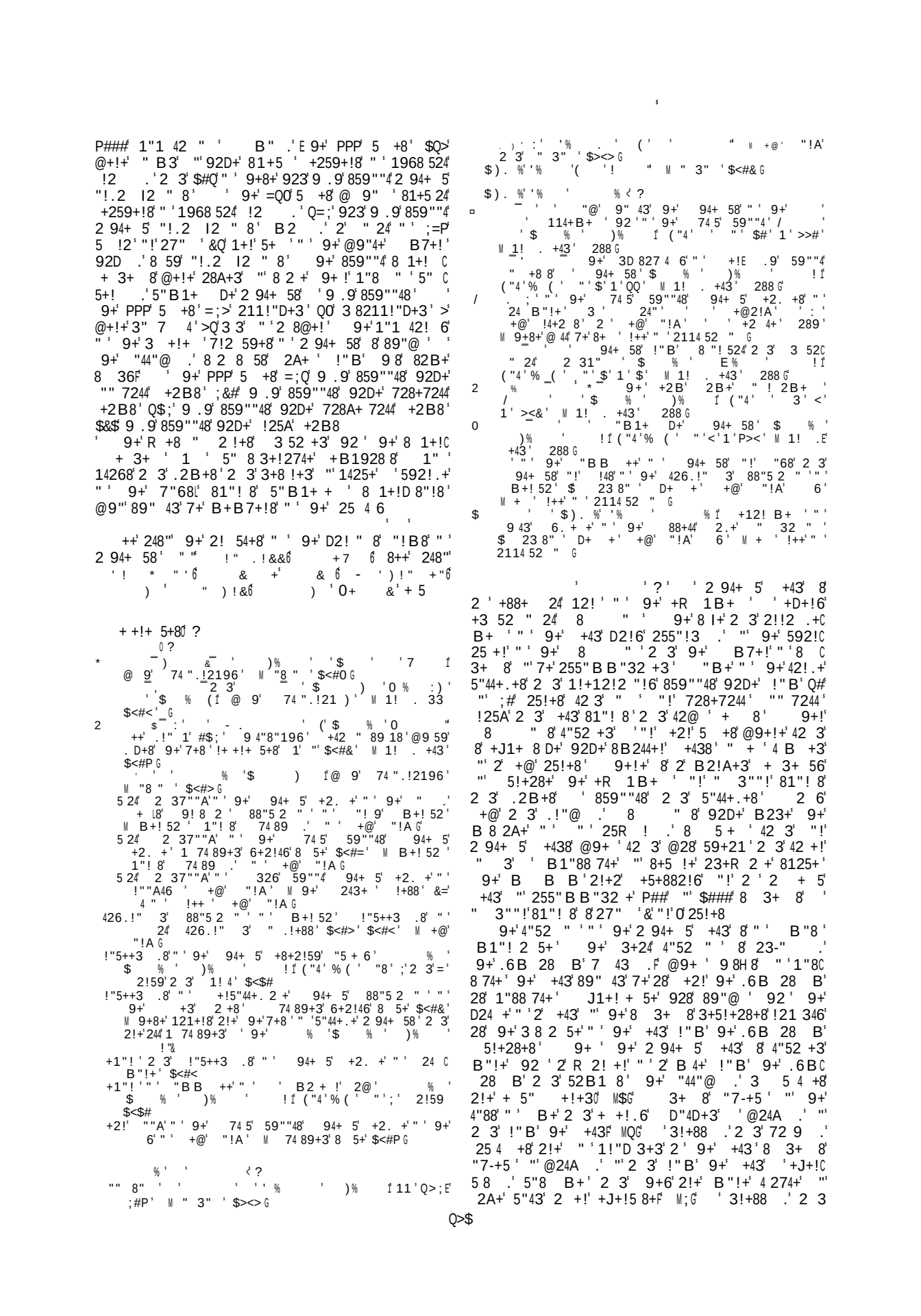






72 9 .' 25 4 +8' 2!+' 1!"D 3+3' 2 ' 9+' +43 ' 9+' 5"8 ' " ' 5" 8 ! 5 " ' 2 3' 23B 8 !2 " ' 8' .!+2 46' 5!+28+3 ' '8B244' +43' +2!' 9+' .6B0 28 B' 8' 8 2446' 1!+ +!274+' "' 2' 42!.+' +43' 924 ' 2' B 4+' "!' 2' B 4+' 2@26

' 61 524' 2 94+ 5' +43' 5" 2 .' 2' 1426 .' +43' "!' 728+7244 ' "" 7244 ' 425!"88+ ' 8"55+!' +43' 81"! 8 ' R 2! +!' B 4+' ! .' !25A ' + 8' 5" ! 8 ' .!2 3' 8 2 3 ' + 5 ' !+R !+8' 2' +43' =### 76'0## ++ ' 27" ' &:' 25!+8 ' 9+' 2!!2 .+B+ ' " '8 59' 2' +43' 8' 89"@ ' " ' 9+' 3 2.!2B

9 8' 8' 2' R 2! +!' B 4+' !25A' @ 9' " +' 8 3+' 1!"4" .+3' "!' 9+' QQ## 62!38' 8 !2 .9 2@26 ' 9+' 8 !2 .9 ' 8 3+8' 2!+' $$## 62!38' ' 4+ . 9' 2 3' &< 62!38 ' $ 59' 212! ' B+28 !+3' !"B' 5 !7' "' 5 !7 ' 9+' 8 3+8' 2!+' -" +3' 2 ' + 9+!' + 3' 76' 8+B 5 !54+8' 92D .' 2' !23 8' " ' $#;' ++ ' &:' 59+8' !"B' 5+ +!' "' 5 !7 ' 9 8' "!B' " ' !25A' 8' 9+' 7+8 ' "!' ! .' !25+8 ' 9+' !25A' 89" 43' 7+' 2 ' 4+28 ' $Q' ++ ' @ 3+F' 2' @ 3 9' " ' $P' "!' $> ++ ' 8' 1!+ +!274+' ' ' 8' " ' 1!25 5274+' "' B2A+' 9+' @9"4+' !25A' $>' ++ ' @ 3+ ' 92 ' 7!+23 9' 89" 43' 7+' . D+ ' "' 9+' 8 !2 .9 2@26

9+' 1"8 " '" ' 9+' 728+7244' 3 2B" 3 ' 52 59+!.8' 12 9 ' 2 3' 725A8 "1' 2!+' 89"@ ' ' 2 3' # ' 9+' 3 2B" 3' B26' 7+' 89 +3' 2' 4 4+' ' + 9+!' 3 !+5 " ' ' " 3' 3+8 !274+' 9+' 4+ +!8' ' ' 2 3' ' 3 52 +' 9+' 1"8 " 8' " ' 9+' =' ."24' 1"8 8' "!' "" 7244 ' 9+' 7+8 ' @26' "' 2!!2 .+' 9+B' 8' "' 8 A' =' 1"8 8 ' 2' "" ' ' 3 2B+ +!' 2 3' =' ++ ' 4" .' Q' 59+8' 7+4"@' 9+' 8 ! 25+' " ' 9+' +43 ' 9+8+' 1"8 8' 92D+' ' 9+' 11+!' + 38' 9"4+8' 2' "" ' 3++1 ' "' @9 59' 9+' ."24' 1"8 8' ' 9+ ' " ' ' 8+' !+B"D+' 9+' ."24' 1"8 8 ' 1 ' @""3+ ' 14 .8' "' 9+' 9"4+8 ' 2 3' 5"D+!' 1' 9+' 8 A+ ' 1"8 8 ' 8"' 28' "' 4+2D+' 9+' .!" 3' "7C 8 ! 5 +3 ' 9+' +!' +43' B26' 248"' 7+' 8+3' "!' 8"55+!' "" 7244' 2 3' 425!"88+ 76' +!+5 .' ."248' @9 59' B26' 7+' 1 ' 1' 2 3' !+B"D+3' +28 46 ' 44' 92 ' 1"! " ' " ' 9+' +!' +43 ' 7+. .' 2 ' 9+' + 3' " ' 9+' !25A' "11"8 +' !"B' 9+' 728+7244' 725A8 "1 ' 2 3' +J + 3 .' "@2!3' 9+' 728+7244' 3 2B" 3 ' B26' 7+' B2!A+3' "' 42@ ' + 8' 5" ! 8 ' 9+!' 5" ! 8' B26' 7+' 42 3' " ' ' 9+' 5"! +!8' " ' 9+' +43 ' " ' 8+3' "!' .!2 3' 8 2 3 ' 9+' B"8 ' 5" D+ + ' 1"8 " 8' " ' 9+' - B1 .' 2 3' 1"4+ED2 4 .' ! 8' 2 3' 1 8' 2!+' 3 52 +3' 76' 9+' 4+ +!8' ' _ ' 2 3' ' 9+' 5 !54+8' "!' 9+' 89" ' 2 3' 92B B+!' 2!+' 3 52 +3' 76' 9+' 4+ +!8' .' 2 3'

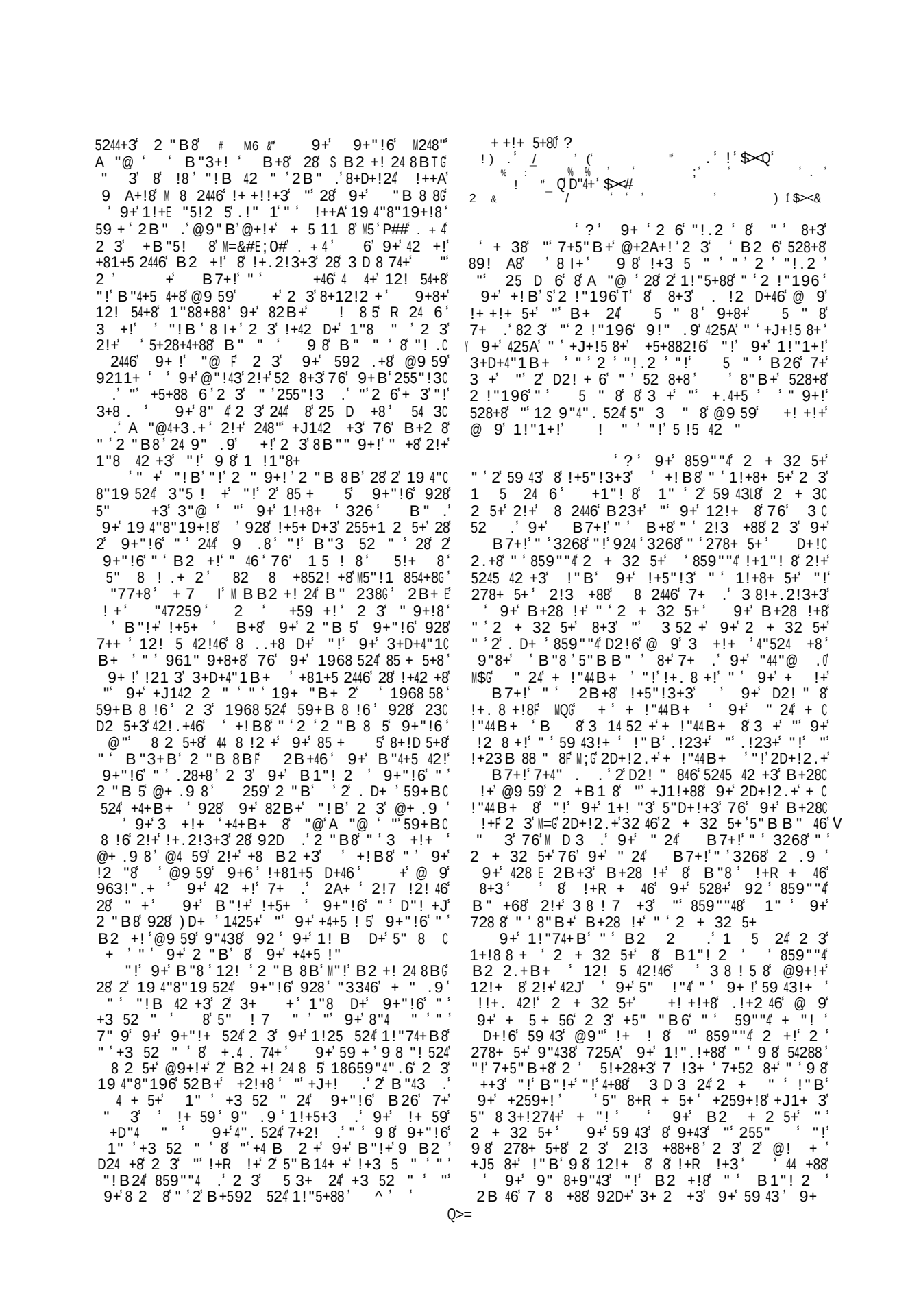
9+' .!2 3' 8 2 3' 89" 43' 7+' 4"52 +3' 28' 89"@ ' 2 ' " ' 9+' " 9+!' 8 3+' " ' 9+' !25A' !"B' 9+' 89' 4 +' " ' 244' 9+' !25+8 ' 9+' 4""!' " ' 9+' !" '!"@' " ' 8+2 8' " ' 9+' 8 2 3' 89" 43' 7+' 2 ' 4+28 ' &' ++ ' 27"D+' 9+' 4+D+4' " ' 9+' !25A ' "!3+!' 92 ' 9+' D +@' " ' 9+' 81+5 2 "!8' B26' " ' 7+' "78 ! 5 +3' 76' 1+!8" 8' @24A .' ' !" ' " ' 9+' 8 2 38 ' ' 9+' " +!' +3 .+' " ' 9+' !25A ' !" ' " ' 9+' .!2 3' 8 2 3 ' 9+!+' 89" 43' 7+' 2' 8 .4+' !"@' " ' 8+2 8' !+8+!D+3' +J54 8 D+46' "!' 5" +8 2 8' 2 3' " 5 248' " ' 25 D+46' + .2.+3' ' 9+' 5" +8 8' 9+ ' 2A .' 1425+' 9+' 8125+' 3+!' 9+' .!2 3' 8 2 3' B26' 7+' 8+3' "!' 3!+88 .' !""B8 ' 72 9!""B8 ' 42D2 "! +8 ' + 5

"' 426' " ' 9+' !25A ' !8 ' B2!A' " ' 76' 2' !"@' " ' 8B244' @""3+ ' 1+.8' 2' 8 !2 .9 ' 4 +' 3"@ ' 9+' 5+ +!' " ' 9+' +43' !"B' " +' + 3' "' 9+' " 9+!' ' 9 8' 4 +' 8 5A' Q' 42!.+' 1+.8 ' P=## ++ ' $ 59' 212! ' B2A .' 9+' 1"8 " ' @9+!+' ' 8' 3+8 !+3H' "' 92D+' 9+' +J !+B+' 1" 8' " ' 9+' + 3' " ' 9+' !25A ' !"B' 9+8+' Q' 42!.+' 1+.8' B+28 !+' " ' $#P' ++ ' ' 59' "@2!3' 9+' 5+ +!' 2 3' B2!A' 9+' 1" 8' 76' 8 2A+8 ' 9+ ' @ 9' 2' @ !+' $##P' ++ ' P' 59+8' ' 4+ . 9' 9+43' 2 ' " +' + 3' 2.2 8 ' 9+' 8 2A+8' 2 3' 92D .' 2 ' 9+' " 9+!' 2' 892!1' 81 A+ ' 85!2 59' " ' " ' 9+' .!" 3' 9+' 8+B 0 5 !5 42!' + 38F B2!A' 9+B' " ' 76' !"@8' " ' 8B244' 1+.8 ' @9 59' @ 44' 7+' 9+' 8 !2 .9 ' 8 3+8 ' 9+ ' B+28 !+' 52!+ 446' 2!" 3' 9+' 5" !8+' 9 8' B2!A+3' " ' 76' 1+.8 ' 2 3' ' ' 8' " 3' 2' +@' 59+8' 4" .+!' "!' 89"! +!' 92 ' 2' R 2! +!' B 4+' 23- 8 ' 8"B+' " ' 9+' + 3' 1+.8' 8"' 28' "' B2A+' +J25 46' 5"!!+5 ' 9+ ' B2!A' " ' 9+' +' "!' 9+' 5 !7 ' $>' 59+8' 8 3+' 9 8' B+28 !+B+ ' 4 +' 244' !" 3' 9+' +43 ' 2 3' 9+' !25A' 8' 42 3' "

9+' 5 !7' 89" 43' 7+' " ' Q' %' < 59' @""3 ' ;' 59+8' 27"D+' 9+' 12 9' 2 3' & 59+8' 3+!' .!" 3 ' 8"' 28' "' 7+' !B ' 9 8' 89" 43' 7+' 7+ ' 2!" 3' 9+' 5 !D+8' 76' 82@ .' 84 8' "' 8' +!' +3.+8' 28' !+R + 46' 28' +5+882!6 ' 9 8' B2A .' 9+' 4 +' " ' 9+' 5 !7' !" 3' 2 3' " ' 2' 8 55+ " ' " ' 8 !2 .9 ' +3.+8 ' "4+8' 89" 43' 7+' 7"!+3' 9!" .9' 9 8' 5 !7' +D+!6' +@' ++ ' - 8 ' 2 ' 9+' 8 ! 25+' " ' 9+' 12 9 ' 8"' 28' "' 244"@' 9+' @2 +!H' "' ! ' 9!" .9' "' 9+' +!' +43 ' 2 3' 9+!+' 89" 43' 7+' - 8 ' 8 3+' " ' 9+' 5 !7 ' 2 ' "1+ ' 3 59' "!' 2' =E 59' 5"D+!+3' 3!2 ' "' !+5+ D+' 9+' @2 +!' 9+' !25A' 89" 43' 92D+' 2' 84"1+' !"B' 9+' " 8 3+' "' 9+' 8 3+' - 8 ' + " .9' 8"' 92 ' 9+' @2 +!' @ 44' ! ' " ' !++46' "' 9+' +!' +43 ' 9+' 4"@+8 ' 12! ' " ' 9+' !25A' 89" 43' " ' 7+' 4+88' 92 ' ;' 59+8' 27"D+' 9+' 4+D+4' " ' 9+' +!' +43 ' 8"' 92 ' ' @+ ' @+2 9+!' 9+' 12 9' @ 44' 3!2 ' !++46' 2 3' 1!"B1 46 ' 9+' + 38' 9+' !25A' 89" 43' 7+' 84"1+3' 1' !"B' 9+' 5 !7 ' 27" ' " +' R 2! +!' 59' "' 9+' "" ' 8"' 28' "' 1+!B ' 3!2 .

9+' 1!"1+!' 5" 8 ! 5 " ' " ' 9+' !25A' 8 ! 25+' 8' " ' B"8 ' B1"! 2 5+ ' ' .""3' !25A' 8' 4 .9 ' 2 3' 81! .6F ' 3!2 8' +28 46' ' @+ ' @+2 9+!' 2 3' 3"+8' " ' .+ ' 3 8 6' ' 3!6' @+2 9+!' 9+8+' !+8 4 8' 2!+' B"8 ' 4 A+46' "' 7+' 8+5 !+3' 76' 7 43 .' 2' !25A' 255"!3 .' "' 9+' "44"@ .' 3 !+5 " 8F ?

$' J52D2 +' 9+' !25A' 8 ! 25+' "' 2' 3+1 9' "



+.4 .+ 12!+ 8 2 3 9+ "74 .2 " " 5"BC B +8 "+3 52 + 59 43!+ " 3+8 +12!+ 8 9+8+ !+. 42 " 8 +427"!2 +3 3+!+3+! 5A 9+ !+2 @+!+ 84 .9 46 7+ +!+3 !"B B+ "B+ 7 9+6 B23+ !"B 9+ " 8+ 2 5"B1!+9+ 8 D+ 868 +B " 859""4 5" C !"4 B2 6 !+81+5 8 9+6 92D+ !+R !+3 "592 .+ "9 8 326 5" !8+ B 8 " 7+ 3+!8 ""3 92 9 8 3+8 !274+ 4+. 842 " @28 +D+!6@9+!+ +R 2446 + "!5+3 "524 2 9"! +8 " + . "!+3 F 2 3 9+!+ @28 2 1+! "3@9+ +D+ 9+ B 8 +!" 2 + M "+44E +! $0<=G 3+! ""A 3 8 5 46 !+25 " 2!6 B+28 !+8 244 8 78+R + ! 4+!8 @9"8" .9 9+@+44E7+ ." 9+1+"14+ 2D"!+3 2 3 8 2446 1!"5 !+3 5"B14 2 5+ @ 9 5"B1 48"!6 +3 52 " 4+. 842 " 1288 . B26 7+ " +3 92 9+ 7 "$0<=5" 2 +3 " +1!"D 8 " @9 59 B"3+! B+8 5"B+8 "7+ 2 24 8 +1 5"B1 48"!6 +3 52 " C S 9+ 8 ! 5 " 859""4 B 8 7+ 5" +3 4 9+ 59 43 8 " 3 "1"88+88 9+ A "@4+3.+ +5+882!6 "+D+!6 !2 " 24 7+ . T 78+R + 8 +18 9+ 3+D+4"1B+ " 5"B1 48"!6 +3 52 " ! 88 2 2!+ B2 46 B2 +!8 " 3+ 2 4 $>>> ++8 @+!+ 27"4 89+3 9+ +J + 8 " ! 88 2 2 9"! 6 "D+! 25C R !+3 1!"D 5+8 !"3 5+3 B2 6 3 5 4 +8 @9 59 !+8 4 +3 7! . .24 61+8 " +3 52C " B"!+ "!+88 3 !+5 46 3+! 9+8 2 +2 9"!C +8 2 3 8 2 + 2 3 @28 1!"D 3+3 "++36 5"B +8 $><# 24 5"B1 48"!6 +3 52C " 4+. 842 " @28 +3 2 3 76 2 8+! +8 " 3+D 5+8 !+81" 8 7 4 6 @28 + 2 4+3 " 12!+ 8 +B14"6+!8 2 3 5"B +8 " 2 3+.!++ @9 59 B2A+8 +D28 " " 9 8 "74 .2 " B1"88 74+ 9+ 528+ " 1+!8" 8 " 8+ 4+3 927 2 " 2 3 24B"8 B1"88 74+ 528+ " 89 .1+"14+8 4 A+ 52 24 7"2 B+ + 5 $ ' "?' "B1 48"!6 +3 52 " +!B2 6 928 "@ 9+ "44"@ .B2!A+3 +2C !+8 J5+1 528+ " 8"B+ 3+ +5 D+8 24 59 43!+ B 8 5"B14+ + 9+ +4+B+ 2!6 # %) &5" !8+" 8 36"!2 + 3 4$= +! 9 8 9+6 B 8 5" + 859""4 4+88 !+. C 42!46 +B14"6+3 2 3 B"8 12! 8 " 9+ +B1 !+ 9"8+ +B14"6+3 B 8 4 9+6 !+259 $0 "! $> B2A+ 2 B B B " 2 + 32 5+ 2 5" 2 " 859""4 2 B" @9 59 B26 7+ 8 2 +3 +!B8 " 9" !8 1+! @++A "! 9" !8 1+! 6+2! 2 3 !2 .+8 !"B Q "=9" !8 1+! @++A ++) *!)0+ &" 2 3 - '!) *+!) "!B+!46 9 8 5"B1 48"!6 2 + 32 5+ @28 B23+ 326 "!+D+ .859""48 7 "11"C 8 " 2B" .1968 5 2 8 3+D+4"1+3 "@2!3 5"B1 48"!6 +D+ .859""4 2 + 32 5+ "! 59 43!+ " $= "$0 6+2!8 " 2.+ 2 3 9+ + 3C + 56 " +5+ 4+. 842 " 928 7++ " "!+R !+ 92 +B14"6+!8 89" 43 !+4+28+ 9+ ! 211!+ 5+8 "! 8 5 + 326 9" !8 1+! @++A " B++ 9+ !+R !+B+ 8 " 5"B1 48"!6 2 + 32 5+ "! 211!+ 5+8 8"B+ +438 5" 2 " 2 + 3C 2 5+ 8 "74 .2 "!6 4 $0 " 9+!8 4 $> 9+ 8 2 5+ 61 524 +!B2 B 8 2 $< "! Q# 7+. Q "! B"!+ 6+2!8 " 5"BC 1 48"!6 8+!D 5+ 9+ 2!B6 @9 59 8 + +5 2 859""4 8 +D 3+ 92 9+ 1+! "3 5"BC 1 48"!6 +3 52 " "! 9+ +!B2 6" 9 8 2 4" ." + 2 5+ ? ! "! "9+ +D"4 " 9+ R +8C " " 5"B1 48"!6 +3 52 " @28 B"8 46 2 2523+B 5 " + 9+ 2114 52 " " 5"B1 48 " @28 "11"8+3 " 9+ .!" 38 " 9 B2 4 7+! 6 76 @! +!8 4 A+ 244+6!2 3 @9"6+ 2!. +3 2D"! " ! ++ +3 52 " 9+ +88+ 248 " A "@4+3.+ 9+ 2 " 24 " D+ " $0<Q 5!+2 +3 2 5"B B ++ " 1 74 5 8 ! 5 " @9 59 2B" . " 9+! "1 58 3+72 +3 9+1! 5 14+" 5"B1 48 " 8 2446 9+ 3 !+5 " " " 2D"! . 9+ 8"E5244+3 -) :) B23+ 2 + 32 5+ "! 2 4+28 ;6+2!8 "74 .2 "!6 3+!8 9+ 21"4+" 5 !+. B 9+ 5"B1 48"!6 1! 5 14+ @28 " 288+! +3 "!;#6+2!8 "! 9+!1!".C !+88 211+2!8 9+ 42@ " $>;;3 3 " 5"B1+4 2 + 32 5+ 7 12D+3 9+ @26 "! 8 5+ @28 B23+ "74 .2 "!6 " 9+ 5"B B +8 "1!"C D 3+ 2 3 + "!5+ +3 52 " $>=> 2! " 1!"1"8+3 2 B"!+ 5"B1!+9+ 8 D+ 42@ 7 244 9+ B+ 9+ R +8 " @28 D"4D+3 @ 9 92 " !++ +3 52 " >0 B" 8 1!"-+5 +3 42@ 288+! +3 9+ +5+88 6 " !+R ! .+259 59 43 !"B &" $; " 2 + 3 859""4 2 3 B1"8+3 1+ 24 +8 " 12!+ 8 @9" +B14"6+3 59 43!+ 3 ! .9 8 1+! "3 "524 5"B B ++8 #% , % & @+!+ " + "!5+ 9 8 2 + 3C 2 5+ 9+8+ 5"B B ++8 @+!+ 248"" 9"43 +J2B 2 " 8 " 59 43!+ +3 52 +3 1! D2 +46 "! 76 !+4 . " 8 7"3 +8 2 3 9+ @" 43 7+ 274+ " 8+ 3 9+ 59 43 " 2 " 9+!859""4 528+ 9+ +J9 7 +3 B1+! +5 !+8 4 8 +J2B 2 " 4 $>>Q @+!+ 42@8 2446 + 25 +3 92 +J1!+88+3 9+ 1! 5 14+ 5"B1!+9+ 8 D+46 9+ 2B" 8 42@ " 2!59 Q> $>>Q 8 B23+ 1! C B2!6 +3 52 " 5"B1 48"!6 2 3 !+4 . " 8 +3 52C " "1 " 24 3 52 " 5" 43 7+ . D+ 2 6C @9+!+ 7 2 4"524 5"B B ++ B 8 "D+!8+ 8 !+8 4 8 D2! + 6 " 3+ 2 4+3 B+28 !+8 @28 2 B+3 " 8+5 !+ 8 + "!5+B+ M !+6 8E ! 8825 . 1 %) $:) "& 1!25 5+ 9+ 27"D+ 42@ @28 . ""3 +J5+1 28 !+.2!38 9+ +8 . " 1! D2 + +3 52 " "524 +J2B 2 " 76 % % @28 R + @"!A274+ 28 !+.2!38 8"B+ A 38 " 859""4 2 + 32 5+ 9+ 42@ 8 24" .! .9 4 +8 9+ 4"524 2 9"! 6 MB26"!G B2A+8 " 2 4 8 " 244 59 43!+ 9+ 5"B B +78+ 5+8 B 8 7+ " +3 " 9+ B26"! 76 9+ 12!+ 8 9+ @+2A +88 " 9+ 42@ 2 1!+8+ 5" 8 8 8 9+ +2!46 2.+ M$$G 2 @9 59 2 59 43 B26 2A+ +J2B 2 " 8 "! 9+ 1! B2!6 5+! 52 + " "7 2 .9 59 9+ B26 2A+ +B14"6B+ 9+7! .9 +8 59 43!+ 9+!+ "!+ 52 7+ +2!4 +8 "!5+3 "427"! 76 85! 1 4" 8 12!+ 8 .42 3 ? 9+ +2!46 +"! 8 "! 9+ 1!" +5C " " 59 43!+ 426 24" .9 B2 2! 2 4 +8 9+ 25 "!6 868 +B B23+ 4+. 842 " "1!" +5 59 43!+ !"B 1!+B2 !+"! "D+!@"!A +5+882!6

7 ' "!' @"' !+28" 8' 5"B1 48"!6' +3 52 " ' !+C 5+ D+3'4 4+'2 + " ' 4'2 +!'$>0#' 9+' !8' @28' 9+' 3 D 3 24 8 5'592!25 +!'" ' .4 89B+ ' S 6' B1!+88 " ' 8' 92 '8 59'2 ' 5 'M8 7-+5 .' "' B1! 8" B+ ' 2 6' 12!+ ' @9"' 3 3' " '8+ 3' 9 8' 5 3' "' 859""4G' ' 1288+3' 2 3' 2 +B1 +3' "' 7+' 52!! +3' " ' @" 43' 1!"3 5+' 2' 2 " 24' 5"B B" " ' B 59' 4+88 32 .+!" 8' 92 ' 92 ' @9 59'2 + 3+3' 2' 1"44' 2J T' 3+542!+3' ! ' +4E 42 !8' 2 ' +J1+! + 5+3' 81+5 "!' ' $>&=' 9+' 8+5" 3' @28' 92 ' 9+' 23B 8 !2 " ' " ' +3 C 52 " ' @28' 8 44' 2' 1! D2 +' "!' 19 42 9!"1 5' 2 2 !' 2 3' 9+' 2 +'@28' " ' 274+' "' + "!5+' 2 + 32 5+8

' $>0#' 2 3' $>0;' 9+' +8 274 89B+ ' " ' 7"2!3'859""48' 52!! +3'248"' 9+' 1! 5 14+' " '5"BC 1 48 " '2 ' !8 ' 9+'8921+' " '1"@+!8' . D+ ' "' 4"524' 7"2!38' ' B"!+' 5"B 14+ +' 25 ' ' $>0&' 42 3' 3"@ '2' D2! + 6' " '3+ 2 4+3' B+28 !+8' "!' + C "!5+B+ ' 2!+ 8' "!' . 2!3 2 8' " ' 59 43!+ ' !"B'P' "' $='M"! . 2446'P' "' $;'G @+!+'1 ' 3+!' "74 .2 " 8' "' 8+ 3' 9+B' "' 2' 5+! +3' 859""4' +D+!6'326' 92 '8 59'859""4' 8' '8+88 " ' '528+' 59 43 !+ ' 2!+' 8+ ' "' 2 ' 5+! +3'M 81+5 +3' 2 3' 211!"D+3G' 859""4' 9+'7 !3+ '!+8 8' " ' 9+' 12!+ ' "' 1!"D+' 9+'5"B1+ + 56' " ' 9+'859""4' D+' "' $;' 8'8 44'23B +3'28' 9+'5"B1 48"!6'2.+' '5+! 2 '! !24'3 8 ! 5 8

' 5" 8 3+!274+' 4 8 ' " '+J+B1 " 8' 9"@+D+!' +J 8 +3' ' $Q' 59 43!+ ' 5" 43' 7+' +J2B +3' 2 3' ' " 3' 1!" 5 + ' 5" 43' 7+' +J5 8+3' !"B' ! 9+!' 2 + 32 5+' ' 868 +B' " ' 12! E B+' 2 + 32 5+' 5" 43' 248"' 7+' 1+!B +3' 76' 4"524' 2 9"! +8' 92 ' 8' "!' 59 43!+ ' !"B' $Q' "' $=' M$$' "' $=' '2.! 5 4 !24' 2!+28G' 9+6' 923' 2 C 2 +3'2'5+! 2 '8 2 32!3' " '1!" 5 + 56' "!' B23+' 3 ! .' P' 1!+D " 8' 6+2!8' 2' !+R !+3' B7+!' " ' 2 + 32 5+8' 8' B"3 +3' 76' 81+5 24' 1!"C D 8 " 8' 9+' .4 84)42@' 8' +J5++3 .46'5"B14+J' 2 3'4"524'2 9"! +8' 92D+'5" 8 3+!274+'42 3+' ' 8' + "!5+B+ ' 9+' 1! 5 14+' " ' 5"BC 1 48 " '928'24@268'7++ '!+8 8 +3' 9+!+'28' ' 9+' +3' 2 +8' "524' 2 9"! +8' 92D+' " ' 24@268'7++ 'I+24" 8' '+J+5 .' 9+'42@8'2 3' 9+!' + "!5+B+ ' 928'7++ '3 +'42!.+46' "' 9+' 2 9"! +8' + .2.+3' ' 52!!6 .' "' + +5 ' 25 "!6'4+. 842 "

' $<#>' 9+' 12882.+' " ' 9+' 9 43!+ L8' 5 ' 5"3 +3' 2' D2! + 6' " ' 4+. 842 " ' !+42 .' "' 59 43!+ ' 2 3' "1+ +3' 9+'@26' "!' B"!+'5"B1!+C 9+ 8 D+' !+ "!B' B+28 !+8' @9 59'2!+' "@' '1!"C 5+88' " '3 85 88 " ' 9+' 27"4 " ' " ' 9+' 924 C B+'868 +B'2 3' 9+'3+D+4"1B+ ' "'5"B1 48"!6' 5" 2 " ' 859""4' 2 + 32 5+' M24!+236' 4+.24C I+3' ' 5" 42 3G' 2!+' "!+8923"@+3

+3' 2 +8' ?' / % "' ?' "B1 48"!6' +3 52 " ' ' 9+' +3' 2 +8' "55 !!+3' !8' ' 288259 8+ 8' 8' 2!'725A'28' $&=Q' 9+'8+4+5 C B+ '@+!+' + -" +3' "' 5"B1+4' 12!+ 8' "' +259' 9+ !' 59 43!+ ' 9+B8+4D+8' "!' "' 1!"5 !+' 92 ' +259 .' "!' 9+B' ' 9+' ++3' "'5"B1 48"!6' +3 52 " ' 8' " 'A++ 46' +4 ' '2 ' 2.!5 4 !24' 1"1 42 " '+81+5 2446' ' ' 8' 9"B".+ +" 8'2 3' ' +@46' 2!! D+3' "!+ . +!8' 2!+' " ' B+!" 8' " ' 4' 9+'211!"259'" ' 9+' B 334+' " ' 9+' +C ++ 9' 5+ !6' 3 3' 288259 8+ 8' !+24 I+' 9+' ++3' " ' + "!5+3' 2 + 32 5+' 9 8' @28' " +' " ' 9+' B2 +!8' "' @9 59' 9+' 2 +' "2!3' " ' 3 52 " ' 5!+2 73' ' $>;0' .2D+' 8' 2 + " H' ' $>=Q' 2' 59 43' 427"!'42@' @28' 1288+3F ' $>PQ' 9+' !8' 42@' " ' 5"B1 48"!6' 2 + 32 5+' 21C 1+2!+3 /' ' !+R !+3' " ' +259' 59 43' !"B' >' "' $=' 6+218' " ' 2.+' 2 ' 4+28 ' $Q' @++A8' " ' 2 + 32 5+' +259' 6+2!' " ' @9 59' & 89" 43' 7+' 5" 8+5 D+' ' 2 !' 1+ 24 6' @28' B1"8+3' 7 ' 12!+ 8' 274+' "' 1!"D+' 1"D+! 6' "!' 27 4 6' 5" 43' 7+' +J5 8+3' 9+' 42@' 8++B8' "' 92D+' 923' 4 4+' "!5+' 2 3' "' 92D+' 542 B+3' 4 4+' 2 + " ' 2 6' " ' 9+' 278+ ++8' @+!+' 59 43!+ ' @9"8+' 12!+ 8' 923'4"8 '5" !"4' " ' 9+B '8"' 9+' 2 9"!C +8' ! +3' 9+ !' 2 + " ' "' 3+29 .' @ 9' ! 2 8

+5". I .' 9+' 82 8 25 "!6' 5" 3 " ' " ' +J 8 .' 42@8' 9+' 2 +' "2!3' !+5"B B+ 3+3' 2' +@'42@' ' $>0Q' 9 8' @28' 1288+3' +J '6+2!' '!+3 5+3' 9+'1+! "3' " '5"B1 48"!6'2 + 32 5+' Q' 6+2!8'M7 ' 9 8' @28' 2.2 '!2 8+3' "' $=' +J ' 6+2!G' 7 ' +J + 3+3' 9+' B+' +259' 6+2!' !"B' $Q' "' Q# @++A8' "@ ' " 5 248' @+!+' 8 7-+5 ' "' 2' 1+ 24 6' ' 9+6' !+ 8+3' "' + "!5+' 9+'42@' ' @28' 248"' B23+' "74 .2 "!6' 1" ' "@ 8' "' 1!"D 3+' 2' 1425+' "!' 9+' 5" +B+ ' " ' ! 2 8' ! 2 ' " 5+!8' @+!+' B23+' 2' 12! ' " ' 9+'859""4' 868 +B' !+5+ D .' 9+ !' 211" B+ 8' !"B' 9+' 859""4' 5"B B ++' ' $>0P' 1+! + 3+ ' 9 47! 5A' .2D+' +J1!+88 " ' "' 9+' ++3' " ' 2' !+. 8 !6' " ' 59 43!+ '8 7-+5 ' "' 9+'42@' 9 8' . D .' ! 8+' "' 9+' 859""4' 5+ 8 8' 868 +B' " ' 288259 8+ 8' ' $>0&' 2' 2 !46' 82 8 25 "!6' 59 43' 427"!'42@' 1288+3' 9+' 4+. 842 !+F 2 3' ' $>0>' ' @28' 1!"D 3+3' 92 ' 8 2 +' .!2 8' 5" 43' 7+' @ 99+43' !"B' "@ 8' 2 4 .' "' 52!!6' " ' ! 2 56'4+. 842 "

A+' B 59' 8 78+R + ' 4+. 842 " ' ' " 9+!' 8 2 +8' 9+8+' +2!46' 42@8' 8+ '."'3' 8 2 32!38'7 ' @+!+' !!+. 42!46' 2 3' +!B + 46' + "!5+3' 9 8' B2 +!'@28' B23+' 9+'8 7-+5 '" '2' 3+ 2 4+3' R !6' 76' 9+'8+5!+ 2!6' " ' 9+' 2 +' "2!3' ' $>>&' +' " 3' 2' D2! + 6' " '3+ 5 + 5 +8' ' 9+' + "!5+B+ ' " ' 9+' 42@' 9 8' 2.+ ' !' +"!.+' ' 2! ' B23+' 2' B7+!' " ' !++"BE + 32 " 8' 8"B+' " ' @9 59' 92D+' 211+2!+3' ' 8 78+R + ' 4+. 842 " ' "8 ' B1"! 2 '@+!+' 9+'!+5"B B+ 32 " 8' 92 ' 9+'7 !3+ ' " ' 1!"" ' ' 9+'528+' " '278+ 5+'89" 43' 244' " ' 9+'12!+ ' 92 ' 2 + 32 5+' 89" 43' 7+' 5"B1 48"!6' 3 ! .' 9+' !+' B+'859""4' 8' '8+88 " ' 92 ' 9+' 2 +' 89" 43' 1!"D 3+' 54" 9 .' 2 3' 7""A8' " ' 59 43!+ ' " ' 3 .+ '12!+ 8' 2 3' 92 ' 9+'5"8 ' " '+3 52 C .' ! 2 8' 89" 43' 2 ' " '2' 42!.+!' 2!+2' 92 ' 9+' "@ ' ? '1!+ +!2746' 9+' 5" 6' "!' 8 2 +' +' 248"' 23D 8+3' 9+' 5!+2 " ' " ' 9+' " 5+' " ' 8 2 +' 2.+ ' "' 4""A' 2 +!' ! 2 56' 28' ' " +5 5 ' 7 ' 9 8' 928' " ' 7++ '23"1 +3' ' $>><' 5"BC 1!+9+ 8 D+'4+. 842 " '@28' 2.2 ' 23"1 +3' ' 9+' B2 +!8' " ' 59 43' 427"!' 2 3' 5"B1 48"!6' 2 + 3C 2 5+' 9+' B"8 ' "D+4' 1!"D 8 " 8' " ' 9 8' 4+. 8C 42 " ' 2!+' " 3' ' 9+' 1!"D 8 " 8' @9 59' . D+' 859""4' 5"B B ++8' 9+'2 9"! 6' "' 211!"D+' 1! C D2 +' 859""48' 2 + 32 5+' 2 '@9 59' 8' 5" 8 3+!+3

+R D24+ ' "' 92 ' 2 ' 1 74 5' 859""48 ' 1!"9 7 8' 9+' +B14"6B+ ' " ' 59 43!+ ' 3 ! .' 9" !8' " ' 859""4' 8+88 " ' !+R !+8' 9+' 1!+8+ 2 " ' " ' 2' 5+! 52 +' 88 +3' 76' 9+' 859""4' 2 9"! +8' ' 9+' 528+' " ' 9+' +B14"6B+ ' " ' 59 43!+ ' C 3+!' $&' 2 3' ' + +5 ' B1"8+8' 2 ' +3 52 " 24' R 24 52 " ' 9+' +@' 42@' 8++B8' "' 92D+' @"!A+3'@+44 ' 7 ' B2 6'2!+28'923' 8 5 + '2+E 5"B B"32 " 8' "!' ! 2 8 '2 3' 9+!+' ' 2 !2446' 2 4+3' ' 8"B+' 3+.!++

9+' +2!46'9 8 "!6' " '5"B1 48"!6' 859""4' 4+. 8C 42 " ' ' " +5 5 ' 8++B8' "' 92D+' 7++ ' 8 B 42!' "' 92 ' " ' 288259 8+ 8 ' 9+' 42@' +J1!+88+3' 2 ' 3+24 ' 7 ' B2 6' "78 254+8' +!C +!+3' @ 9' 8' + "!5+B+ ' ' 9+' +J2B 2C " ' " ' 9+8+' 42@8' B23+' ' $><# ("' "' "!' $>>>E$>><' 11 ' =0#EPQ&G' 9+' 8 2 +B+ ' "55 !8' 2.2 ' 2 3' 2.2 ' 92 ' 9+' 42@' 8' S1!25C 52446' 2' 3+23' 4+ +! T' 9+' 59 + ' "78 254+8' @+!+0' 9+' 3 +!+ 5+' " ' 4"524' 1 74 5' "1 " F 9+' @ 44 . +88' " ' 4"524' 1"4 5+' "!' " 9+!' " C 5 248' "' + "!5+' 9+' 42@E2.2 8 ' 3 D 3 248 ' +81+5 2 6' 9"8+' @9"' ++3+3' 9+' 288 8 2 5+' 92 ' 52B+' !"B' 9+' 427"!' " ' 59 43!+ F 9+' 425A' " ' 859""4' 255"B B"32 " 8 ' +81+5 2446' "!' ! 2 ' 59 43!+ F 9+' 425A' " ' 5"!!+81" 3+ 5+' 7+ @++ ' 9+' 1+! "3' " ' 5"B1 48"!6' 2 + 32 5+' 2 3' 9+' " 24' 8+88 " ' " ' 9+' 859""48' @9 59' 24@268' 1!"C D"A+3' !!+. 42! 6' 2 3' 425A' " ' !+.2!3' "!' 9+' 42@F 2 3' 9+' 1"D+! 6' " ' 12!+ 8' ' 8'4+. 842C " ' " ' $>0Q' " +5 5 ' ""A' 9+' 9+!" 5' 8 +1' " ' 1 .' 9+' + "!5+B+ ' " '59 43' 427"!' 42@8' 2 3' 5"B1 48"!6' +3 52 " ' 42@8' ' 9+' 92 38' " ' 8 2 +' 2.+ 8' 2' B+28 !+' @9 59' 928' 1!"72746' . D+ ' 92 ' 8 2 +' 9+' B"8 ' + +5 D+46' + "!5+3' 868 +B' 6+ ' 3+D 8+3 ' 9+' 42@' !+ 8+3' 248"' "' !+5". I+' 1"D+! 6' " ' 12!+ 8' 28' 2' 72!' 9 8' !+C B"D .' " +' " ' 9+' 5"B B" +8 ' .!" 38' " ' +D2C 8 "

9+' "44"@ .' 4 8 ' 89"@8' 9+' 32 +8' 2 ' @9 59' 9+' 8+D+!24 8 2 +8' + 25 +3' 5"B1 48"!6' +3 52 " ' 4+. 842 " ' M !"B' "' "' $>>>E$>><' 1 =0$G0' 288259 8+ 8 ' $>PQF' 8 ! 5 ' " ' "4 BC 7 2' $>&=F' (+!B" ' $>&0F' +@' 2B189 !+' 59 .2 ' 289 . " ' >0F' " +5 5 ' 2 3' +@' +J 5" ' $>0QF' +D232 ' $>0;F' +@' "!A ' 2 828' 24 "! 2 ' $>0=F' 2 +' +@' :+!8+6G' $>0PF' 6"B .' $>0&F' 9 " ' $>00F' 85" 8 ' $>0<F' 9"3+' 842 3 ' 44 " 8 ' 2A" 2 ' " 2 2 ' $>>;' + @++ ' $>>P/ 2 3' $><# +8" 2 ' +7!28A2 ' 329" ' "4"!23" ' !+." ' 2 3' 29' B23+' 42@8' " ' 9+' 8 7-+5

' 8' ! +' 92 ' 1!+D " 8' 4+. 842 " ' 923' 8"B+C B+8' 9+' + +5 ' " ' !+R ! .' 859""4' 2 + 32 5+' ' 9+' 8+D+ ++ 9' 5+ !6' " +5 5 ' B C 2 +3' 288259 8+ 8' ' 1+ 24 I .' 8+4+5 B+ ' ' 9+6' 3 3' " ' 5"B1+4' 12!+ 8' "' +3 52 +' 9+ !' 59 43!+ ' 9+' 82B+' 8 2 +' ' $>$;' !+R !+3' 9+' 1!"1! + "!8" ' B2 25 ! .' +8 274 89B+ 8' "' 8++' 92 ' 9+' 59 43!+ ' ' 9+ !' +B14"6'5" 43' !+23 ' @! +' 2 3' 5 19+!F 2 3' ' $>=Q' 9+' +B14"6B+ ' " ' 59 43!+ ' 3+!' $P' @28' 1!"9 7 +3' 4+88' 9+6' 923' 7++ ' 8 ! 5 +3' "!' ;' B" 98' ' 9+' 1!+5+3 .' 6+2!' 8' 2!' 725A' 28' $>P# "@ 8' ' 2 +' @+!+' 2 9"! I+3' "' B2A+' 42@8 2.2 8' ! 2 56' 7 ' " 9 .' 211+2!8' "' 92D+' 7++ '3" +' H

' $><# Q0' 8 2 +8' 2 3' 9+' 8 ! 5 ' " ' "4 BC 7 2' 923' 42@8' " ' 5"B1 48"!6' +3 52 " ' 9 8' +B7!25+3' 244' +J5+1 ' 9+' " 9+! ' 8 2 +8' @9 59' 923' " '7+. ' " '4+. 842 +' " ' 9+' 8 7-+5 ' ' 244' " ' 9+8+' +J5+1 ' 85" 8 ' @9 59' 1 ' $;' 28' 9+' B B B' 2.+' $=' "!' B"!+' @28' 9+' B C B B' 2.+' " '+J+B1 " ' !"B' 859""4' 2 + 32 5+F 7 ' ' 2 +' 9"3+' 842 3 ' 2 3' 289 . " ' 9+' B B B' 2.+' @28' $P' 2 3' ' " +5 5 ' +8" 2 ' 2 3' 6"B .' 9+' B B B' 2.+' @28' $&' "!+' B1"! 2 ' @28' 9+' 2B" ' " ' 2 + 3C 2 5+' "' 7+' B23+' +259' 6+2!' 8 5+' ' 9+' 5"B C 1 48"!6' 2 + 32 5+' 8' 5" 8 3+!2746' 4+88' 92 ' 9+' 44' +!B' 9+' 1!25 524' 3 5 4 +8' ' 9+' @26' " ' + "!5 .' 9+' 42@' 2!+' B 4 14 +3' ' $0' 8 2 +8' 2 ' 2 + 32 5+' " ' $Q' @++A8' @28' 1!+C 85! 7+3F' ' =' $&F' 2 3' ' =' Q#' 46' " +' 8 2 + ?' " +5 5 ' ?' !+R !+3' 2 + 32 5+' 28' 4" .' 28' 9+' 859""48' @+!+' ' 8+88 " ' @9 4+' 288259 C 8+ 8' ' + +5 ' "7 2 +3' 9+' 82B+' 9 .' ' 5 +8

' 2 ' 8 2 +8' +J5+1 ' +@' :+!8+6' ' @28' !+1"! +3' 92 ' 859""4' " 5+!8' 2 3' 9+ !' ! 2 ' " 5+!8' @+!+' 592!.+3' @ 9' + "!5+B+ ' " ' 9+' 42@' 9+!+' @28' "' 5+ !24 I+3' 5" !"4' +J5+1 ' ' " +5 C 5 ' ' +@' :+!8+6' 1"4 5+' " 5+!8' 2 3' 5" C 8 274+8' @+!+' !+R !+3' "' 52!!6' " ' 9+' 42@' + 24 +8' 4 5 +3' " ' 12!+ 8' @+!+' 24B"8 ' C "!B46' +8' !2 . .' !"B' d$' "' dQ#' @ 9' 2 .B+ 2 " ' "!' !+1+2 +3' " + 8+' (+!6' +@' 8 2 +8' 923' ! 2 ' 859""48' 9" .9' ' 8"B+' 528+8' 6" 98' 5" 43' 7+' 5"B B +3' "' !+ "!B' 859""48

46' $# 8 2 +8' !+1"! ' 2' B B B' 2.+?' !2 . .' !"B' $# "' $;' ? '7+4"@' @9 59' +B14"6C B+ ' 3 ! .' 859""4' 9" !8' 8' 1!"9 7 +3' ' $;' 8 2 +8' 2' 5+! 2 ' 2B" ' " ' 859""4' 2 + 32 5+' ? !"B' $ "' P' 6+2!8' ? ' 8' B23+' 2' 1!+!+R 8 +' " ' +B14"6B+ ' @9 4+' 28' 6+ ' 9+!+' @28' "' !+ +!C + 5+' "' 3+ +' +3 52 " 24' R 24 52 " 8' @9 59' B 8 ' 7+' 2 2 +3' @+4D+' 8 2 +8' 2A+' 8"B+' " 5+' " ' 9+' A 3' " ' 8 ! 5 " ' @9 59' B 8 ' 7+' . D+ ' ' 1! D2 +' 859""48 ' ' 9 8' 8' "' 7+' 25C 5+1 +3' ' 4 + ' " ' 2 + 32 5+' 2 ' 1 74 5' 859""48 ' 7 ' 9+8+' !+R !+B+ 8' @+!+' B+2.+!' 2 3' 1!"7C 2746' + "!5 74+' 46' 9 "' B2A+8' 2 + 3C 2 5+' 5"B1 48"!6' 7+6" 3' 9+' B B B' 2.+ ?' !"B' $=' "' $&E)' ' 528+' " ' 59 43!+ ' " ' +B14"6+3

' >' "!' B"!+' 8 2 +8' 4"524' 2 9"! +8' @+!+' 2 9"! I+3' "' 1!"D 3+' !++' 7""A8' "!' 59 43!+ ' " ' 3 .+ ' "!' 1""!' 12!+ 8F' 7 ' 28' B2 6' " 9+!' 8 2 +8' 1!"D 3+3' !++' 7""!2' "!' 244' 1 1 8' 9 8' 5"B12! 8" ' 8' " ' " ' B 59'D24 +' 'D+!6' 8 .C 52 46' Q' 8 2 +8' ?' 9 "' 2 3' "4"!23"' ?' +' C 274+' 4"524' 2 9"! +8' "' 1!"D 3+' !++' 54" 9 .' 9 8' 5"B .' 3+ +46' "' 9+' +43' ' 2 3' " ' 59 43!+ ' @9"8+' 12!+ 8' ++4' "" 1""!' "' 8+ 3' 9+B' "' 859""4

$ ' ' "' ?' 6' $<#>' 24B"8 ' 244' 9+' 8 2 +8' 923' + 25 +3' 4+. 842 " ' " ' 9+' 8 7-+5 ' 9+' "44"@ .' 274+' 2A+ ' !"B' 9+' "' "' "' $<#>' ("4' ' 89"@8' ' 3+ 2 4' 9+' 8 2 "

' (' ' ' ' ' ' ' '

2 3456 7 +6 *!82"6 $ &

' ') ' $ ' ' '(' ') ' ! % ' %(')% ' %/ ' '
% ' '(. % ' .

$#6+2!8' ' 25 "! +8' '24'
528+8 $Q' 4+88' "!0
192 8'"!'59 43!+ '" ' 9+'
@ 3"@+3' "!' 3 8274+3
$Q' B +8

>E$=$ &' B" 98 Q#' @++A8' P "' QP "' 59 43' 3+!' $=' B26' 7+' +B0
5" 8+5 D+ 14"6+3' 3 ! .'859""4 9" !8

$Q' 6+2!8' ' 244' 528+8' "' 59 43' $=' "' $>' 274+' "'
B2 25 ! .' +8 270 @! +' B26' 7+' +B14"6+3' '
4 89B+ 8' +J5+1 ' 52 0 2' B2 25 ! .' +8 274 890
." F $=' 4+88' "' 8 10 B+ ' 4+88' 7+' 928' 2 + 3+3'
1"! ' 2' 12!+ ' "!' 8+4 ' 28' 859""4 $Q'@++A8' 9+'1!+5+3 .'
81+5 +3' 76' 42@F $=' ' 6+2!
B +8F +B24+8' " ' 2 '
244' 'B +8

>E$= $=' 6+2!8' ' 2 6' B+!52 4+' "' B 26' @"!A'
"!' B2 25 ! .'+8 2)' "!' .2 ' '859""4 9" !8' 0
4 89B+ '@"!A89"1 ' 9"0 4+88' 9+' 52 ' !+23' 2 3' @! +'
+4 "!' 28' B+88+ .+!' + 5' .4 89' "!' 2 + 38' .9 '
9 43!+ ' $Q' ' $=' 1"9' 859""4
1+! B ' B 26'@"!A' '12!0
+ 8' 52125 2 +3' "!'
3 ! .'D252 "

>E$&\ dP' "' dQP $=' 6+2!8' ' 2 6' 3+!0 42@ 4' "' +B14"6' 59 43!+ '
.!" 3' @"!A8' B +' 3+!' $=' 3 ! .'859""4 9" !8'
8B+4 +!' B 44' "!' 25 "!6' 4+88' 9+6' 92D+' 5" B14 +3'
"' +B24+' B 2D' 7+' +B0 @ 9' 9+' 859""4E2 + 32 5+'
14"6+3' '2'5"24 B + 42@F 3+!' $&' 274+' "'
!+23' 2 3' @! +' 4+88' 2 0
+ 3 .' 326' "!' .9 ' 859""4

" +5 5 OE$& " '+J5++3 .'dP'+259' $=' 6+2!8' ' 2 6' B+0 9 43!+ ' 3+!' $=' B26' " ' 7+'
@++A' " '278+ 5+ 592 524' B+!52 4+' "!' +B14"6+3' @9 4+' 859""4' 8' '
B2 25 ! .') 27E' 8+88 " ' 9 43!+ ' $=' "' $&'
4 89B+ 52 " ' 4+2D+' 859""4' "' 7+'
+B14"6+3' 4+88' 9+ !' +3 0
52 " ' 8' 82 8 25 "!6' "' 9+'
4"524' "!' 8 2 +' 859""4' 7"2!3
"'59 43' $=' "'$&' B26' 7+'8"' +B0
14"6+3' B4+88' 9+' 928' 2 0
+ 3+3' 326' "!' .9 '859""4' $Q'
@++A8' 9+' 1!++ .'6+2!

OE$= &' B" 98' W B26' 7+' !+0 !8 ' " ' "D+!' dQF $=' 6+2!8' ' 2 6' 25 "!6' @"!A89"1' "!' B2 250
3 5+3' 76' 3 8 ! 5 8' 2 +!' " ' "D+!' dP' ! +8 274 89B+ '
"' ;G '3+ 2 4 ' B1! 80 +J5+1 ' '52 .' 3 80 @"!A89"1' "!' B2 250
" B+ 'Q' "'P' 3268 " B+ 'Q' !6' + 5 ' "!' "' 8 11"!' ! +8 274 89B+ '
@ 3"@+3' B" 9+! +J5+1 ' "!' 27" ' 2 6' @"!A89"1' 8 "!+' " 5+' 9 43!+ ' 3+!' $=' B26' " ' 3"'
B2 25 ! .'+8 274 89B+ 'F $Q' 6+2!8' 2 +! 9" +4' 9+2 +!' 28' B+88+ .+!' + 5' 9 43!+ ' $Q' 2 6' @"!A' 859""4' 9" !8F "!' 3+!' $&'
:2 ' $' $<#>' "' 59 43' "' $=' B26' .+ ' 1+!B ' "' ' 1!+5+3 .' +B14"6B+ 8'
3+!' $=' B26' 7+' +B14"6+3' 28' @"!A' '5+! 2 ' 528+8 4+88' 9+6' 52 ' !+23' 2 3' 4+88' 9+6' 52 ' !+23' 2 3'
1!)+3 .' 5"4 B ' W@ 9' @! +' 2 3' 2 + 3+3' 859""4' $;#'3268'1!+5+3 .'6+2!
9+' +J5+1 " ' 9+!+' " +3' 9 43!+ ' 3+!' $P' B26' " '
B4+88' 274+' "' @! +' 2 3' 928' 7+' +B14"6+3' B"!+' 92 '
2 + 3+3' 859""4' $Q' @++A8' 9+' &#'3268' @ 9" '5" 8+ '
1!+5+3 .' +B14"6+3' 859""4' $Q' 6+2!8' ' "!' 27" ' 2 6' " ' 4+.24' . 2!3 2
4 B7 2 B2 25 ! .'+8 274 89B+ 'F $Q' 6+2!8' 2 +! 4+88' 8"' 2 + 3+3' 859""4
:2 ' $' $<#0' +J5+1 ' "!' 8 11"!' ' "8+ '"!'12!+ 8' '81+5 +3' 528+8 +!' :2 ' $' $<#>' "' 59 43'
3+!' $=' B26' 7+' +B14"6+3' 28' 859""4' $Q' @++A8' 9+'
1!+5+3 .' 6+2!F 3+!' $>'
4+88' 8"' 2 + 3+3' 859""4

>E$&H B1! 8" B+ ' " ' $=' 6+2!8' ' 2 6' B +' 250 "' 59 43' 3+!' $=' B26' 7+' +B0
"D+!' &' B" 98' "!' "!6' @"!A89"1' B+!52 0 14"6+3' ' 2 6' @26' 3 ! .'
7" 9 4+' +8 274 89B+ '42 0 859""4' 9" !8
3!6' 9" +4' + 5 ' +J5+1 '
"D+!' $Q' 3 ! .'D252 " 8

OE$&a 4+88' 92 ' $$#' 3268' dP' "' dQ#' 2 3' 5"8 8 $=' 6+2!8' ' 2 6' B+!52 0 "' 59 43' $=' "' $&' 274+' "' !+23' 2 3' @! +' B26' 7+' +B14"6+3'
" '25 24' +259 . 8 2 3' 5"B B +3' 4+' 8 " ' 25 "!6' 4+88' 9+6' 92 + 2 4+88' 9+6' 92 + 3 .' 2 ' +D+ .'
4'12 3' + 24 6' " 5+' 9+2 +!' +4+D2 "!' 859""4' ' 9+!+' 8 " +' "' 859""4' ' 9+!+' 8 " +' "'
"!' 248+' 8 2 +B+ 8' "!' 27" ' 28' B+88+ .+!' "!' 59 43' 3+!' $=' B26' 7+' +B0
28' "' 2 .+' "!' 2 + 30 3! D+!F $&' ' "!' 27" ' 14"6+3' 2 '2 6'@"!A' "!'@2.+8'
2 5+' d;' "' dQ#' E 2 6' B +' "' +B24+' 2 6' B +' "' +B24+' 3 ! .' 9+' 859""4' +!B
B26'@"!A' ' "!' 27" ' 2' B 26'@"!A' '2' B +

OE$=\ dP' "' dQP' 2 3' $=' 6+2!8' ' 2 6' B2 250 9 43!+ ' 3+!' $&' 274+' "'
3 85!+ " ' " ' 5" ! ' ! 0 4+' +8E' !+23' 2 3' @! +' .4 89' B 26'
B1! 8" B!2 ' Q' "' 27 4 89B + ' B +' " '7+' +B14"6+3' ' "!+." .'
<#'3268 R 2!!6'42 3!6' !+ "D20 +B14"6B+ 8' +J5+1 ' 'D252)'
.' @"!A8' 72A+!6' "!' " ' '1 74 5'859""48
1! .'" 5+' "' +B24+'
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Q><

| | | |

'	) '$	$	' ' '(' %	% ') ' ! % ' % (' % ' '(.	)% ' % ' ' % ' .
+7!28A2HH	Q P^ @"' 9 !38' " ' 859""4' +! B F ' "' 528+' 4+88' 92 ' $Q'@++A8' 44' +! B' ' 5 +8' 9" +4' + 5	dP' "' QP' M" ' ! 2 ' " 5+!G	$=' 6+2!8' ' 2 6' B 2 25E 25 ! .' "!' B +!52 4+' +8 274 89B + ' " 5+' 9" +4' + 5	"' 59 43' 3+!' $=' B 26' 7+' + B C 14"6+3' ' 2 6' 8+!D 5+' 3 ! .' 859""4' 9" !8
+D232	E$= $&'@++A8F >'"" 8+" H D+	!8 ' dP#' "' d$##F 8 78+R + 'd$##' "' dQ##0' @ 9'5"8 8'		
+@' 29 !+ 2B 1E' OE$=	>' 44' +! B	!8 ' d$#F 8 78+C R + ' dQ#	$Q' 6+2!8' ' 2 6' B 2 25C ! .'+8 274 89B +	"' 59 43' 3+!' $=' B 26' 7+' + B C 14"6+3'3 ! .'859""4'8+88 " 8' "!' 3+!' $&' ' 274+' "' !+23' 2 3' @! +' .4 89' "' B C "!' 274+' "' !+23' 2 3' @! +' .4 89' B 26' 7+' + B 14"6+3' 4+88' 2 + 3 .' 326' "!' +D+ .'859""4' ' 2 6' 8' 9+43
+@' : +!8+6	OEOGH 44' +! B	/ 89274+' 28' 2' 3 8C "!3+!46' 1+!8" HL	$=' 6+2!8' ' 25 "!) '@"!AC 89"18' B 448' "!' B 2 C 25 ! .' +8 274 89C B + 8'F 248"' B +8	9 43!+ ' 3+!' $P' B 8' 92D+' 2 + 3+3' 859""4' $Q'@++A8' 9+' 1!+5+3 .' 6+2!' 28' 2' 5" 3 C " ' "' + B 14"6B +
+@' +J 5" ' 0E'	;' B "$= 98	dP' "' dQP' "!' B 1! 8C " B + ' " '+J5++3C .'$# 3268		
+@' "!A	>E' 44'$&+[B' M 5 ' $' "' : +' $G	!8 ' "' ' +J5++3 .' dP F' 8 78+R + ' " ' +J5++3 .' dP#' "!' B 1! 8" B + ' " ' +J5++3 .' ;# 3268' "!' 7" 9' +' 2 3' B 1! 8" B +	$=' 6+2!8' ' 25 "! +8F ' $=' "' $&' 9+' 59 43' B 8 ' 92D+' 2 + 3+3' 859""4' $;# 3268' 9+' 1!+5+3 .' 6+2!' 2 3' 7+' 274+' "' !+23' 2 3' @! +' .4 89' 2 3' 5 19+!' B 2!' 1!"D C 8 " 8' 21146' ' 1425+8' " ' "D+!' ;### 1"1 42 " ' "' @"!A' ' B +!52 4+' +8 274 89B + 8' 7 8 +88' " 5+8' !+8 2 !2 8' 9"C +48' +J1!+88' "!' B +88+ C .+!' 8+!D 5+' +J5+1 ' "!' 59 43!+ ' "D+!' $Q' '8B 244' 1425+8' 3 !) ' D252 " ' "!' @"!A' ' "!' 27" ' B +8' $&' 6+2!8' 8' 9+' B B B ' "' +B 24+' B 26' @"!A' '2' B +	42@ 4' "' +B 14"6' ' 2 6' 7 8 +88' "!' 8+!D 5+' 59 43' 3+!' $=' 3 ! .' 859""4' +! B F $=' "' $&' 4+88' 9+' 928' 2 C + 3+3' $;# 3268' 1!+5+3 .' 6+2!' 2 3' 52 ' !+23' 2 3' @! +' .4 89' 2 3' 5 19+!' "!' M ' !8 ' 2 3' 8+5" 3' 54288' 5 +8C 928' 5" B 14+ +3' +4+B + 2!6' 5" !8+' "!' 2 + 38' +D+ .' 859""4' $&'@++A8' 2' 6+2!' ++' 1!+5+3 .'5"4 B
"! 9' 2!"4 2	>E$=S $&'@++A8	dP' "' dQP	$Q' 6+2!8' ' 2 6' 25 "!6' "!' B 2 25 ! .' +8 27C 4 89B + 'M3"+8' " '21146' "' "68 +!' 52 .' 2 3' 125AB .G' F $Q' 6+2!8' ' B +8'+B 14"6 .'"D+!' $#' B + 'M7"68G' 0' 59 43!+ '$Q' "' $;' B 26' 7+' + B 14"6+3' ' 25 "! +8' " 46' 28' 211!+ 5+8	11!+ 5+8' $Q' "' $;' 6+2!8' B 8' 92D+' 2 + 3+3' 859""4' =' B " 98' '1!+5+3 .' $Q
"! 9' 2A" 2	>E$= 44' +! B	dP' "' dQ#' M" ' 859""4' " 5 24G	$Q' 6+2!8' ' B +8' 25C "! +8' 2 3' @"!A89"18' M5" 8 " '"' 2 +G	9 43!+ ' 3+!' $=' B 26' " '7+' + B 14"6+3' ' 2 6' B 2 +!' 3 ! .' 859""4' 9" !8' 4+88' 9+6' 92D+' 2 + 3+3' 859""4' $Q' @++A8' 3 ! .' 9+' 6+2!
9 "	>E$=H$ 44' +! B F ' "' 528+' 4+88' 92 'Q=' @++A8	dP' "' dQ#F " '3+ 2 4 ' B 1! 8" B + ' !"B' $#' "' ;# 3268	$=' 6+2!8' ' 2 6' 25 "!6' @"!A89"1' 7 8 +88' " C 5+' B +!52 4+' +8 27C 4 89B + ' 9" +4' 28' B +8C 8+ .+!' + 5	"' 59 43' 7+ @++ ' $=' 2 3' $&' B 26' 7+' + B 14"6+3' ' "!+C .' "55 12 " 8' @ 9" ' 2' 859""4 .' 5+! 52 +
A429"B 2	>E$& ;' "'& B" 98HH'	d$#' "' dP#	$&'6+2!8' ' B +8'M "'. !48' ' B +8G	
!+."	<E$=H 2 3'H 44' +! B	dP' "' dQP' +' "!' B C 1! 8" B + ' Q' "' $#' 3268' "!' 7" 9	$=' 6+2!8' ' 2 6' 25 "!6' 8 "!+' @"!A89"1' ' "!' 27" ' 2 6' B +' "!' ' 9+' +4+) 819' +4+19" +' "!' 1 74 5' B +88+ .+!' 8+!C D 5+	"!+." .' + B 14") + 8' "!C 7 33+ ' "' 2 6' 59 43' $=' "' $&' 4+88' 9+' 2 + 3+3' 859""4' $&# 3268' 1!+5+3 .' 6+2!' 2 3' 52 ' !+23' .4 89' "' 59 43' 3+!' $=' B 26' +' + B 14"6+3' ' 2 6' @"!A' "!' 5" B 1+ 82 " ' 3 !C .'859""4' 9" !8
+ 864D2 2	>E$&\ 44' +! B F 7 ' 9+' 859""4' 7"2!3' "' +259' 3 8 ! 5 ' 928' 1"@+!' "' !+3 5+' 9 8' "' ' 4+88' 92 ' O#' 1+!' 5+ ' " ' 9+' +! B	!8 ' " ' +J5++3 .') * ' & + , ' " ' +J5++3 .' dP F' " ' 3+ 2 4 ' B 1! 8C " B + 'F ! 8 ' " ' "D+!' Q' 3268F 8 78+C R + ' " ' "D+!' &	$=' 6+2!8' ' 2 6' +B 14"6C B + ' +J5+1 ' 3" B +8 5' 5"24' B .' "!' 2! B' 42C 7"!' F $&' 6+2!8' ' 5"24 B +8F $=' 6+2!8' ' "!' 27" ' 9+' 8 3+' @"!AC .8" ' 5"24' B +8' !48' B 26' " ' @"!A' ' "!' 27" ' 5"24' B +8	"' 59 43' $=' "' $&' B 26' 7+' + B C 14"6+3' 4+88' 9+' 52 ' !+23' 2 3' @! +' .4 89' 2 3' 928' 5" B 14 +3' @ 9' 9+' 859""4' 42@8
9"3+' 842 3	OE$&H\ 44' +! B	" ' +J5++3 .' d Q #	$;' 6+2!8' 7+ "!+' $=' 2 +!' +5 ';$ $<#&' ' 2 6' 25C "!6' B 2 25 ! .' "!' 7 8 +88'+8 274 89B +	9 43!+ ' 3+!' $;' B 26' " ' 7+' + B 14"6+3' +J5+1 ' 3 ! .' 859""4' D252 " 8

Q<;

81+5 " ' " ' 1! D2 +' 859""48' 9" .9' ' "' D+!6' "!B24 B2 +!' "'2'5+! 2 '+J + '5"B1 48"!6' 2 + 32 5+' B 8 ' 8 2 3' "!' 244' @ 9' 9+' ! .9 ' " ' 81+5 " ' " ' 1! D2 +' 859""48

!"B' 9+' 8 2!' ' 928' 7++ ' " 3' 92 ' 9+' 82 8 25 "!6' +J+5 " ' " ' 2 + 32 5+' 42@8' !+C R !+8' 81+5 24' 23- 8 B+ 8' @ 9 ' 9+' 859""48' 9 43!+ ' "!5+3' "' 5"B+' "' 859""4' 2.2 8 ' 9+ !' @ 44' "!' @ 9' 4 4+' +!+8 ' '859""4' 52 " ' 7+' 54288 +3' @ 9' 59 43!+ ' @9"' 2 + 3' !+. 42!46' 9"8+' 3 81"8+3' "' 7+' ! 2 8'89" 43' 92D+' 81+5 24' 859""48' @9+!+' 54"8+' 3 85 14 +' B26' 7+' +J+!5 8+3' 9"8+' B+!+46' !!+. 42!' ++3' .!23+3' "!' 81+5 2446' .!23+3' 54288+8' "!' 9+ !' 255"B B"32C " ' 3+!' "!B+!'5" 3 " 8'" '23B 8 !2 " ' '@28' 5 8 "B2!6' "' +J1+4' 9+' 5"!! . 74+' 1 1 4' !"B'859""4' 92 +D+!' 9+' + +5 ' " ' 9 8' " ' 9+' 1 1 4' +J1+44+3' ' 2 ' 4+28 ' 923' 9+' + +5 ' " ' !+B"D .' !"B' 9+' 859""4!""B' @92 ' @28' 5"B B" 46' 2' 8" !5+' " ' B"!24 5" 2. " ' 2 3' " ' .!+2 ' 3 5 4 6' "' 9+' +259+!' 9 8' 54288' " ' 59 43!+ ' 8 44' +J 8 8' 2 3' "' 23+R 2 +' 5"B1 4C 8"!6' B+28 !+8' 52 ' 7+' 3 !+5 +3' "@2!3' 9+B' 4+88' 81+5 24' 859""48' 2!+' 1!"D 3+3 ' 9+' 859""4' 2 9"! +8' 9+B8+4D+8' @ 44' 92!346' 5""1+!2 +' ' + "!5 .' 9+' 42@' ' 8 59' 8' " ' 9+' 528+' +@' "!A' 2 +' 1288+3' 8' !8 ' 5"B1 48"!6' 42@' ' $>0=F' 2 +!' " ! ++ ' 6+2!8L' ! 24' ' @28' " 3' 92 ' 9+' 42@' 923' " ' B"3 +3' 859""4' 2 + 32 5+' 923' " ' 8+5 !+3' 9+' 5""1+!2 " ' " ' 859""4' 1! 5 1248 ' 2 3' @28' 8 78 2 2446' 2' 3+23' 4+ +!' 9+' B259 +!6' "!' 8' +J+5 " '@28' 23+R 2 +' 7 ' 2 ' 7" "B' ' @28' 2' R +8 " ' " ' 425A' " ' 25C 5"B B"32 " ' "!' 9+' 3 5 4 ' 1 1 4

9 ' !+5+ ' 6+2!8' ' 928' 7+5"B+' "7D " 8' 92 ' 2 ' 4+28 ' 9!++' 2 3' 1!"72746' " !' 3 +!+ ' 61+8' " ' 81+5 24' 54288' "!' 859""4' 2!+' +5+882!6' ' 2 6'5 6' "' 1!"5 !+' 9+' 23+R 2 +' 52!!6 .' " ' " ' 9+' 42@' ' # & 9"8+' 1 1 48' @9"' 92D+' 7+5"B+' R +' 5"!! . 74+' 2 3' @9"8+' 12!+ 8' 92D+' 4"8' 5" !"4' " ' 9+B ' B 8 ' 7+' 8+ ' "' 2 ' 8 " 24' 859""4' 5"B B +3' "!' 2' +!B' " ' 6+2!8' 46' 9"!" .9." .' !+ "!B' 8' 23+R 2 +' #.& ' 326' ! 2 ' 859""4' @9+!+' 9" !8' 2!+' 4" .' 2 3' B2)' @"!A' 27 32 ' 9 8' 859""4' @9 4+' 244"@ .' 1 1 48' "' 84++1' 2 ' 9"B+ ' 89" 43' 2 B' 1! B2! 46' "f A++1' 9+B' " ' 9+' 8 !++' 2 3' 2@26' !"B' 5" 2. " ' " ' 723' 5"B12 6' 59' 859""48' 3"' " ' +J 8 ' ' B+! 52 ' 7 ' 2!+' " 3' ' .4 89' 5 +8' M5G 1+5 24' 54288+8' 89" 43' 7+' 1!"D 3+3' "!' 1 1 48' @9"' 52 " ' +28 46' 7+' 7!" .9 ' 3+!' 9+' "!3 2!6' 859""4' 3 85 14 +' 9+8+' 54288+8' B26' 92D+' 9+' 82B+' 1!".!2B8' 28' 9+' "!3 Q!6' 54288+8 ' 7 ' 89" 43' 7+' 3+!' 592!.+' " ' +259+!8' " ' 8 5 + ' B2 ! 6 ' +J1+!+ + 5+ ' 2 3' 1+!8" 24' 592!25 +!' "' 5"1+' @ 9' 9 8' 61+' " ' 59 43 ' # & "88 746' 2' " ! 9' 61+' " ' 54288' 89" 43' 7+' "!' 9"8+' @9"' 76' !!+. 42!' 2 + 32 5+' 92D+' 9"1+4+8846' 244+ ' 2@26' !"B' 9+' !+. 42!' 54288' 2 2 B+ 8

9+' !+. 8 !2 " ' " ' 59 43!+ ' 8' " ' 2' 5 " ' 92 ' 52 ' 7+' 23+R 2 +46' 52!! +3' " ' 76' 9+' 1"4 5+' 3+12! B+ ' ' 89" 43' 5+ +!' 2!" 3' 9+' 859""4' 2 3' 9+' " 5+!8' !+81" 8 74+' "!' ' 89" 43' 7+' 2446' 2B+ 274+' "' 9+'+3 52 " ' 2 9"! +8 27"!' " 5 248' 2 3' " 9+!8' 5" 5+! +3' @ 9' 9+' + "!5+B+ ' " ' 59 43' 427"!' 42@8' 81+5 " ' 2 3' 8"' "! 9 ' 3+24 .' 28' 9+6' 3"' @ 9' 9+' B "! 6' " ' 859""4' 59 43!+ ' 89" 43' 24@268' 92D+' 255+88' "' 9+' !+. 8 !2 " ' 52!38' ' "!3+!' "' .+ ' 2 6' 81+5 24' "!B2 " ' 92 ' 9+6' B .9 ' !+R !+' 245 C 42 " 8' 92D+' 89"@ ' 92 ' @ 9' 9+' 868 +B' " ' !+. 8 !2 " ' " 5+' 8 2! +3' 2 ' 2D+!2.+' " ' " +' 2 + 32 5+' " 5+!' "' " !' "!' D+' 9" 82 3' 859""4' 59 43!+ ' 52 ' +28 46' 52!!6' " ' 9+' 1!"D C 8 " 8' " ' 5"B1 48"!6' !+. 8 !2 " ' 9+' 52!38' 89" 43' 7+' 8"' 2!!2 .+3' 28' "' !+5+ D+' 2 ' 9+' + 3' " ' +259' 6+2!' 2' 8 2 +B+ ' " ' 9+' 2B " ' " ' 2 + 32 5+' B23+' 76' +259' 1 1 4' @9+ 9+!' ' 1 74 5' "!' 1! D2 +' 859""4' 2 3' 248"' 8"B+' 8 2 +C B+ ' 28' "' !+28" 8' "!' 278+ 5+

4' 8"B+' 23+R 2 +' 868 +B' " ' !+. 8 !2 " ' 8' + "!5+3' 2 3' 9+' B259 +!6' "!' ' 7 4 ' 1' @ 9 ' 9+' 859""4' 868 +B ' '@" 43' 211+2!' 92 ' 2' .!+2 ' B2 6' " ' " !' + "! 8' ' 9+' 3 !+5 " ' " ' 5"B1 48"!6' 2 + 32 5+' B 8 ' 7+' 4+ ' 2 3' B 8 ' 248"' + 3' "' 7! .' 9+' 42@' "' 5" +B1

(% ' ' 0 ' (' 0) "' ? ' 9+' 8+5" 3' 3 5 4 6' 4 +8' ' 9+' 82 8 25 "!6' B+ 9"38' " ' 54288 6 .' 2 3' !+2 .' 9+' 1 1 48' @9"' 92D+' 24!+236' 7+5"B+' 233 5 +3' "' ! 2 56 ' "!' @9"' 2!+' B 8 8' 28' 2!' 28' 9+' 859""4' 8' 5" C 5+! +3' ' 8' @+44' A "@ ' 92 ' 1! 5 1248' " ' 859""48' @ 44' " + ' 2 4' "' 2 3' ' 9+' + "!5+B+ ' " ' 9+' 42@' @9+ ' 9+' 7"6' 5" 5+! +3' 8' " +' @9" ' "!5+3' 725A' "' 859""4' 3"+8' " ' 1!" ' 76' 8' @"!A' 2 3' 8' 2' 5" 24' 8" !5+' " ' 3 8 !72 5+' 9+' "!3 2!6' 859""4!""B' 8' " ' 2 3' 89" 43' " ' 7+' 2' !+ "!B' 859""4' 2 3' 2' 1! 5 124' " + ' ++48' - 8 +3' ' !+ 8 .' "' 4 5 ' " ' 2' 859""4!""B' @ 9' "! 6' @+44E3 81"8+3' 1 1 48' 2' 7"6' @9"' 928' 7+5"B+' 233 5 +3' "' ! 2 56 ' 2 3' 928' 7+5"B+' 2' 1"88 74+' 8" !5+' " ' B"!24 5" 2. " ' "' 9+' !+C B2 .' 59 43!+ ' 9+' 859""4' 1! 5 124' A "@8' 92 ' " +' "!' @"' 81" 4+3' 59 43!+ ' B26' 542 B' 2 ' 24 ".+ 9+!' 3 81!"1"! " 2 +' 892!+' " ' 9+' +259+!L8 B+' 2 3' + +!.6 ' 2 3' B26' 248"' D+!6' B2 +! 2446' 3+B"!24 I+' 9+' 859""4!""B ' 9+' " 9+!' 92 3 ' B26' " ' 7+' 2 ' 24' 1!25 5274+' "' 8+ 3' 8 59' 2' 7"6' "' 9+' !+ "!B' 859""4

9+' "7D " 8' !+B+36' 4 +8' ' 9+' 44+!' 3+D+4"1C B+ ' " ' 3 85 14 2!6' 54288+8' " +' " ' @9 59' 2 ' 4+28 ' 89" 43' 7+' 2 259+3' "' +259' 42!.+' 859""4' 2 3' 9+' 1! 5 124' 89" 43' 92D+' 4' 1"@+!' " ' 5"B B B+ ' "' 9 8' 3 85 14 2!6' 54288 ' 9+' 3 85 14 2!6' 54288' @" 43' " ' 5" !8+' 7+' 2 ' .!23+3' 54288 ' 2 3' 9+' +259+!' 89" 43' 7+' 81+5 2446' 8+4+5 +3' 2 3' 5"BC 1+ 82 +3 ' 2 3' " ' B"!+' 92 ' Q# "!' QP' 7"68' 89" 43' 7+' A+1 ' ' 2' !"" B ' + 32 5+' ' 9 8' 3 85 14 2!6' 54288' 89" 43' 5" +' 28' 4" .' 28' ' 8++B8' 92 ' 9+' 1 1 4' 8' B+ 2446' "!' B"!2446' 2' B 8 ' "!' 9+' !+. 42!' 859""4!""B

+6" 3' 9 8' 3 85 14 2!6' 54288' 9+!+' 89" 43' 7+' 2' 326' ! 2 '859""4' " '2' 61+' " ' "@' " 3' ' B+! 52 ' 7 ' @9 59' 8' @"!A .' D+!6' 8 55+88 446' ' 5+! 2 ' .4 89' 5 +8' 9 8' 326' ! 2 ' 859""4' 89" 43' !+5+ D+' 244' 59 43!+ ' @9"' 2!+' "" 5"!! . 74+' "!' 9+' 3 85 14 2!6' 54288 ' 2 3' @9"' 1"88+88' 9"B+8' @9 59' 2!+' 521274+' " ' 8 114+B+ C .' 9+' 859""4' @"!A ' 9+' 326' ! 2 ' 859""4

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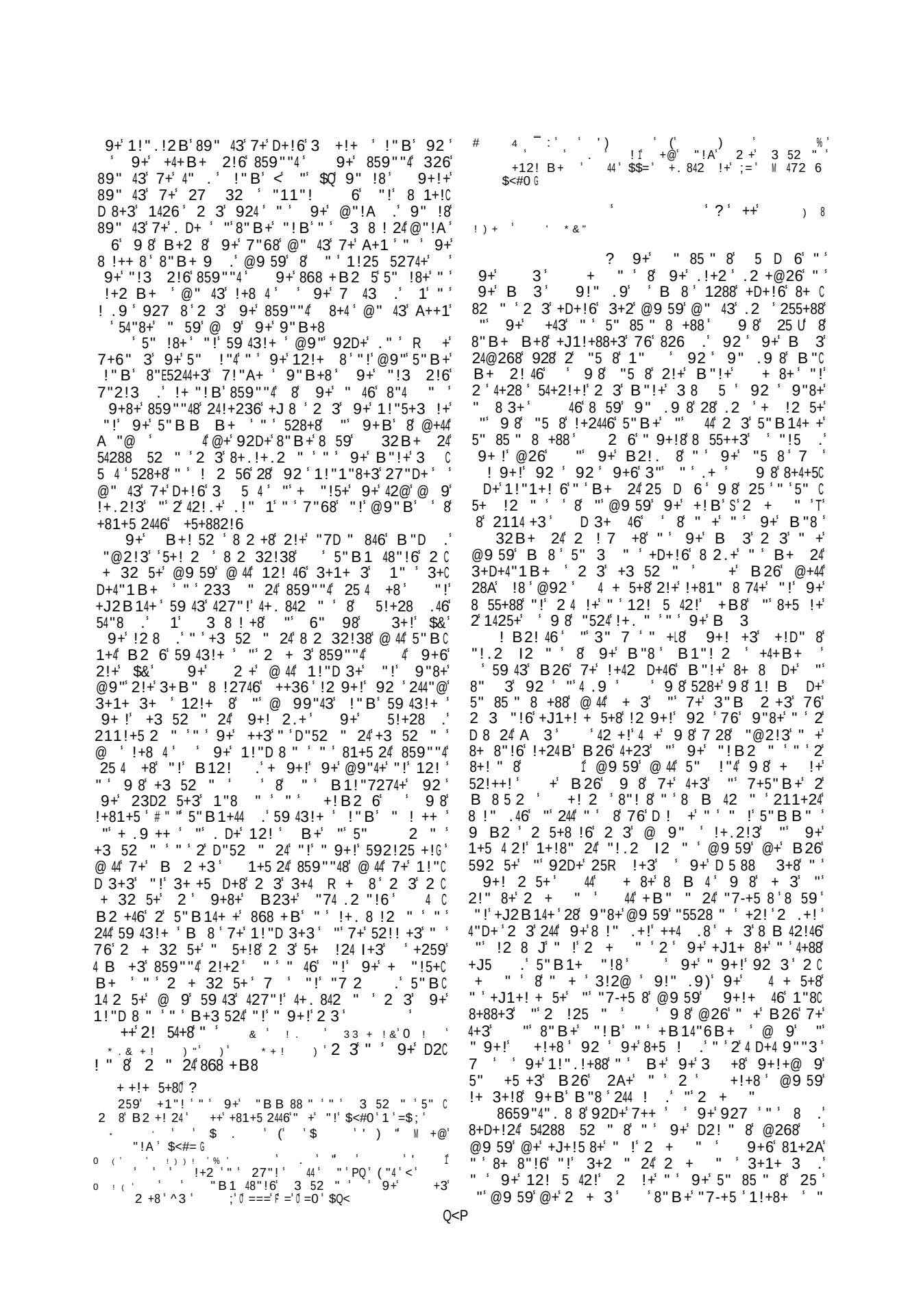

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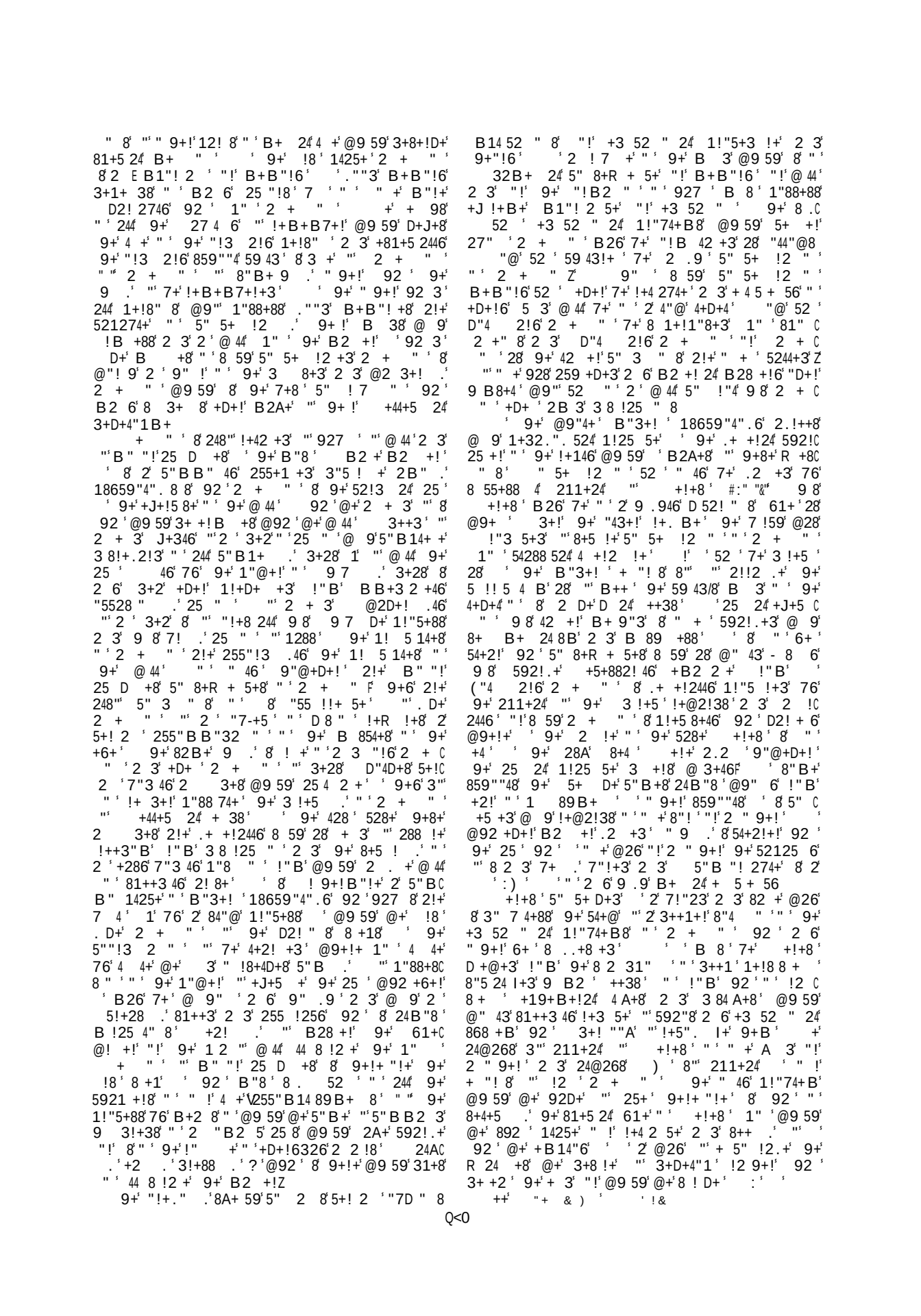

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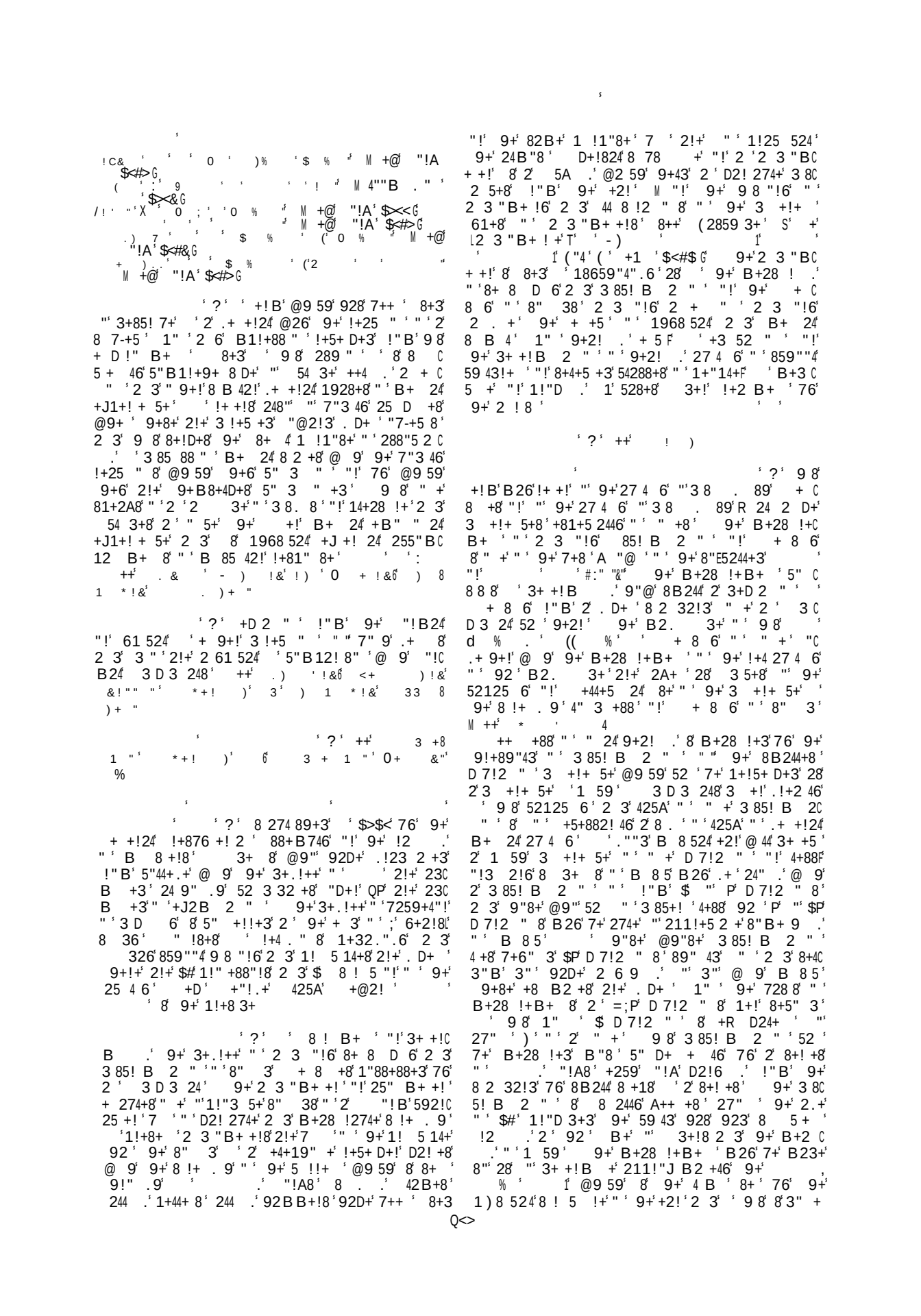

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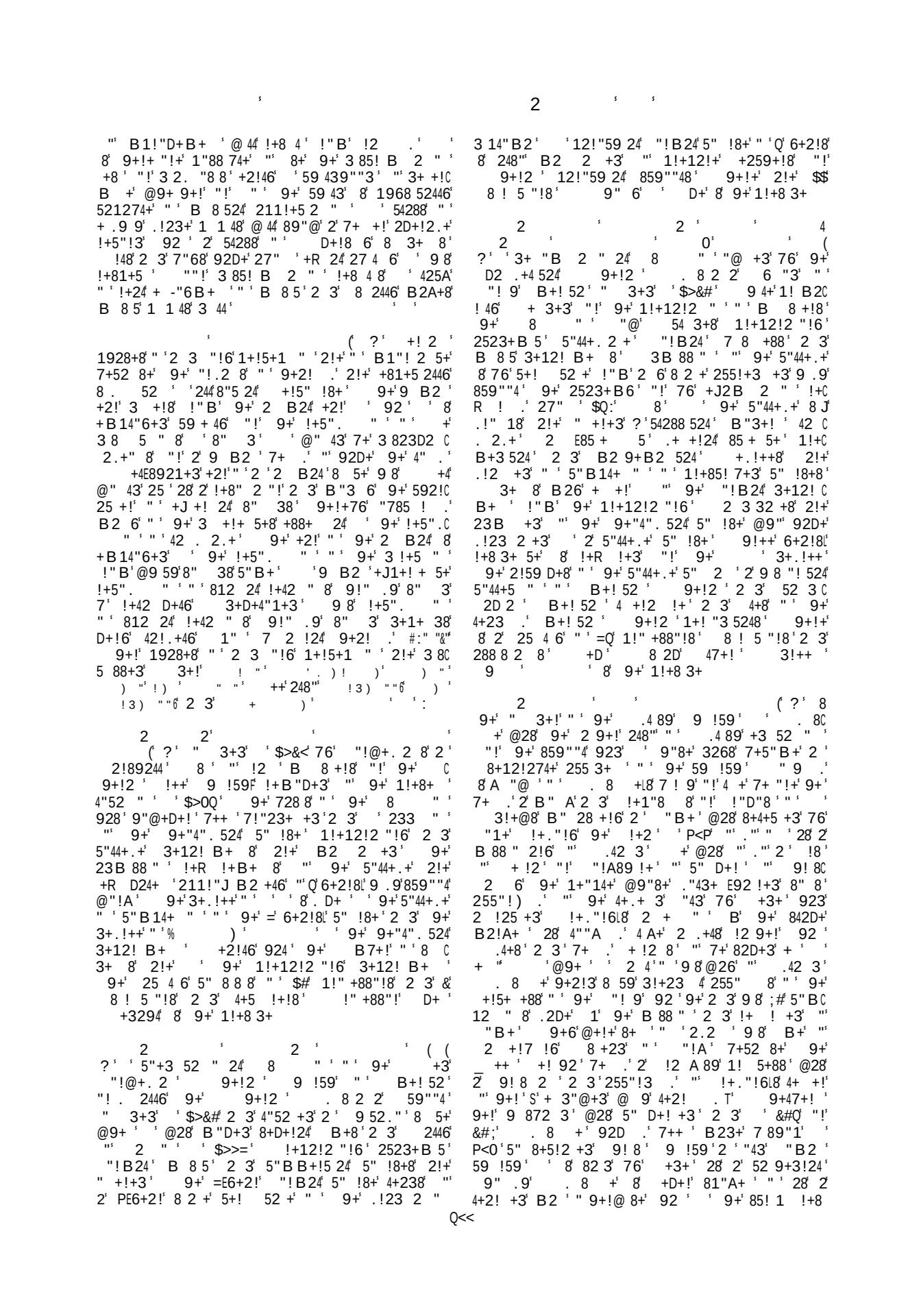

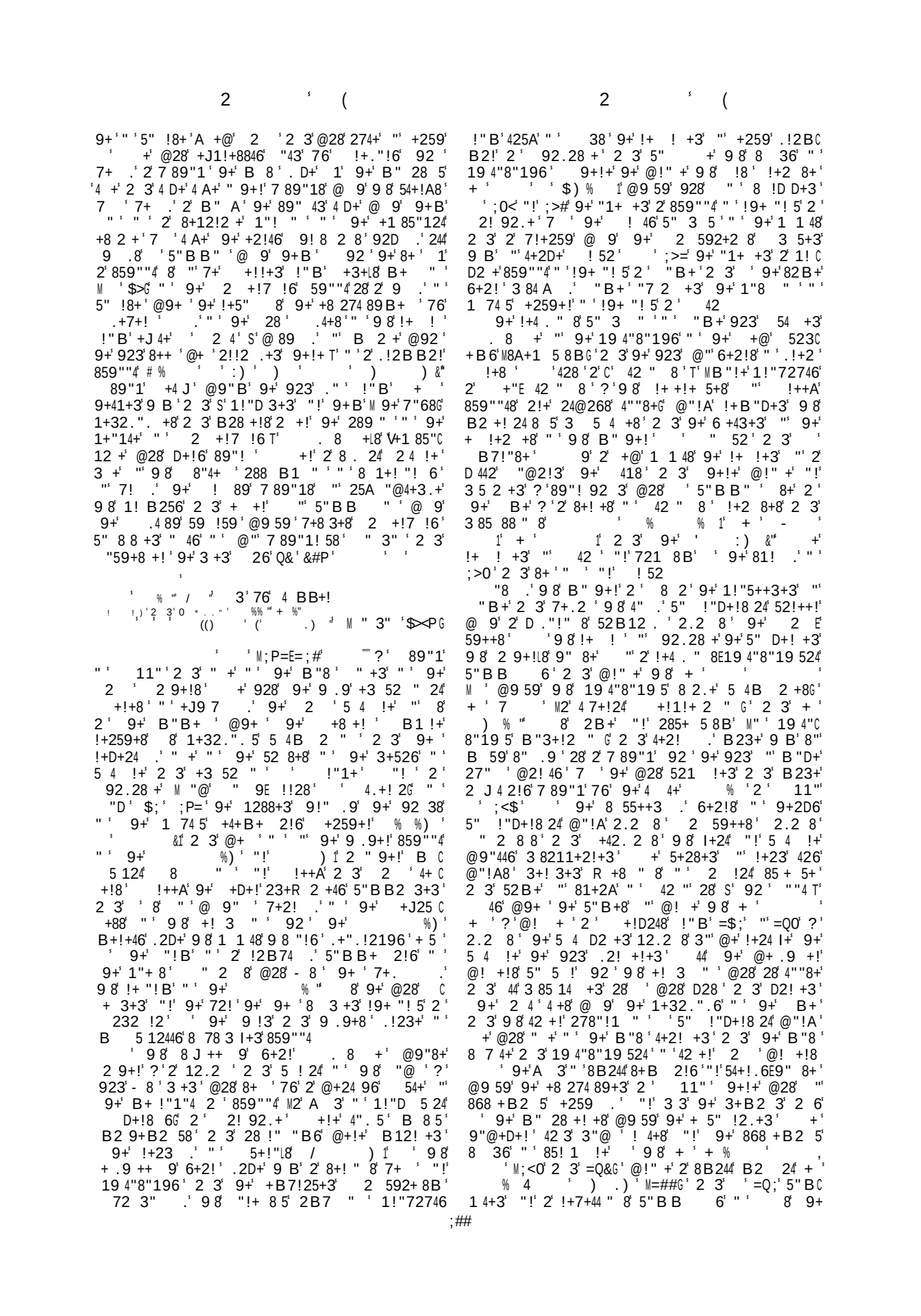

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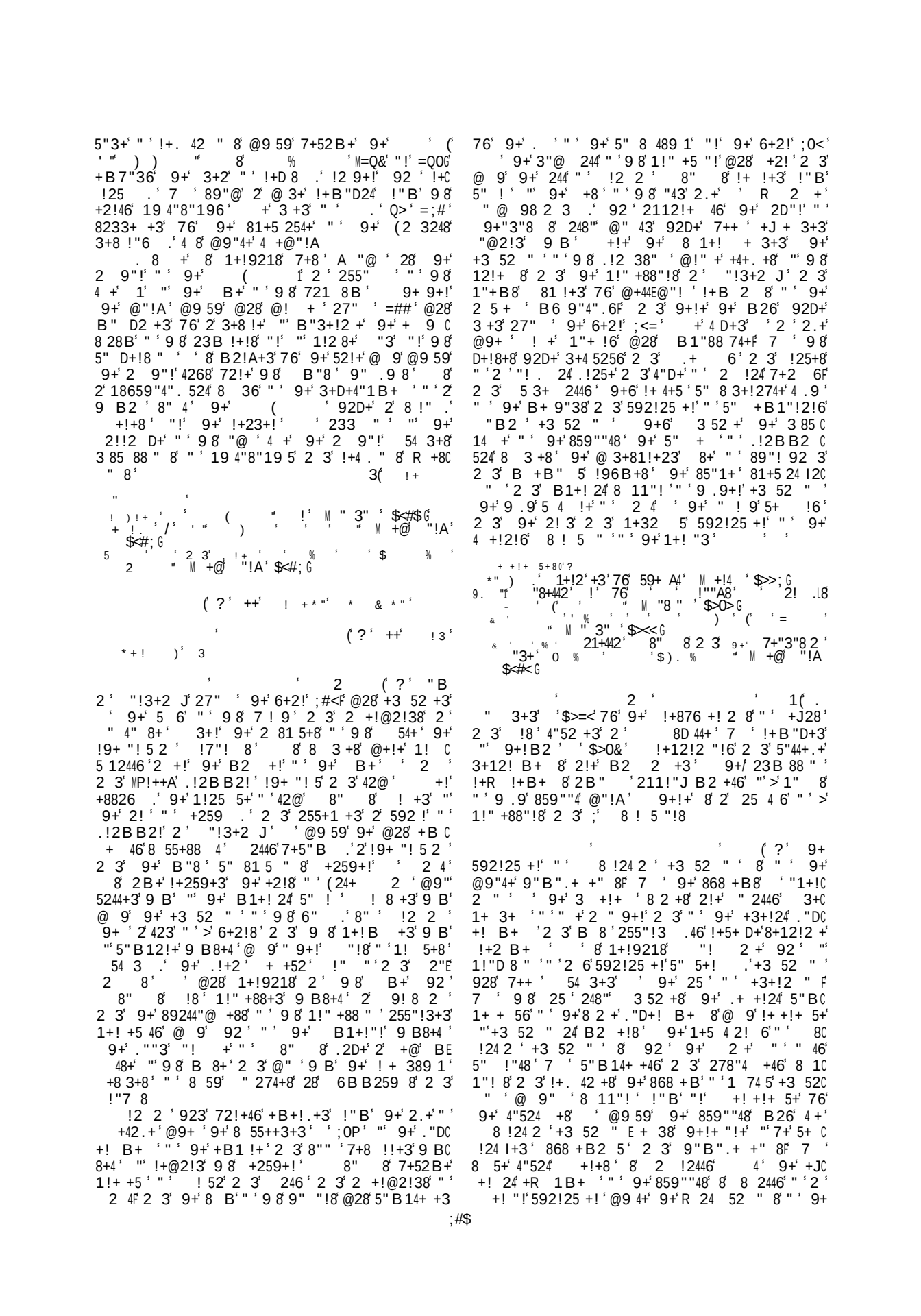

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9 4+ 9+ 1 74 5 +4+B+ 2!6 859""48 2!+ !++ 9 8 8 " 9+ 528+ @ 9 9+ 1 74 5 8+5" 32!6 859""48 9+8+ B"!+"D+! 2!+ +@ B7+! 9" .9 9+6 5"B1+ +8 55+88 446 28 "' !+8 4 8 @ 9 9+ .!+2 8+B E1 74 5 8+5" 32!6 859""48 @9 59 4" ! 89 9+ 8 !24 2 5"4" +8 28 9+6 3"' .42 3 9 4+ 9+ +J + 8 " 1 74 5 25 4 +8 "!' 8+5" 32!6 8 7-+5 8 92 " " 46 9+ 1! 5 1)8 7 9+ 288 8 2 +259+!8 9+8+ 859""48 2!+ !+R + 46 D+!8 6 .!23 2 +8 2 3 92 9+6 2!+ 446 5"B1+ + 28 2 1!+8+ 5" 8 +3 "' 1!+12!+ 1 1 48 3 !+5 46 "!' 9+ + !2 5+ +J2B 2 " 8 " D+!8 +8 8 9+!+ "!+ 1"88 74+ 25 7 " " 9+"!6 "!' 1 1 48 "' !+5+ D+ 23D2 5+3 8+5" 32!6 C 8 ! 5 " 9+ "!3 2!6 8 2 +859""48 2 6 859"42!89 18 2 3 7 !82! +8 + 274+ 59 43!+ @9"' 2!+ 8 55+88 4 5"B1+ D+ +J2B 2 " 8 "' 2 + 3 9+ 8+5" 32!6 859""48 2 3 2 +!@2!38 9+ D+!8 6 !++ " 2 6 592!. +' "' 9+ !' 12!+ 8 9+!+ 2!+ 24 ".+ 9+!' Q<$> 8 2 + 859""48 +@ " 9 24+8 9+ 5+ 8 8 " $<#$ @28 " 3 92 " 46 >' 1+!' 5+ " " 9+ 1"1 E 2 " " P 6+2!8 2 3 "D+!' @+!+ 274+ "' !+23 9+ 2 24 +J1+ 3 !+ " 9+ ."D+! C B+ " " +3 52 " 85 + 5+ 2 3 2! 8 27" ^<0# ### 8 +!4 . 9 8 8 1!"D 3+3 " " 9+ 5" 8"4 32 +3 !+D+ + 9+!+ 8 "' 81+5 24 2J "!' !2 + "!' +3 52 " 2 3 "' 4"524 5" ! C 7 " 8 !+R !+3 !"B "@ 89 18 "!' 5" +8 "!' 9+ 8 11"! " 859""48 9+ B7+!' " 1 1 48 2 + 32 5+ 2 9+ 8 2 +859""48 " +@ " 9 24+8 $<#0 @28 Q;P 0;& 9+!+ @+!+ &# ### 859"42!8 2 + 32 5+ 2 1! D2 + 2 3 3+ "B 2 " 24 859""48 9+ 142 " . D .' 8 2 + 2 3 "' 3+ "B 2 " 24 +3 52 " @28 272 3" +3 $>>#' 2 3 9+!+ 8 "' 4 A+4 C 9""3" 8 8!+D D24 /' 9+ !2 ."' 8 2 +859""4 +259+!8 8 2 8 2.+ " !2 8 " "' 2 9 .9 2 3 "!B 4+D+4

+59 524 +3 52 " !+5+ D+8 2 !21 346 C 5!+28 .' 211!"1! 2 " !"B 9+ 8 2 +' ."D+! C B+ 2B" .' $<#0 "' 27" ^QP ### 8 +!4 . 9+ 8+D+!24 ."D+! B+ +59 524 5"4C 4+.+8 2 3 859""48 ".+ 9+!' 92D+ 2 '+ !"44B+ " 27" $Q ### 8 3+ 8 B24+ 2 3 +B24+ 9+ 2 +' 248"' 5" 3 5 8 2 ' 23B !274+ 2.! 5 4 !24 "44+.+ 2 3 " !' +J1+! B+ 24 2!B 8 2 3 .!+2 +J12 8 " 8 2A .' 1425+ 9+ 3 !+5 " " 2.! 5 4 !24 +3 52 " +D+ 9+ ! !24 859""48

63 +6 D+!8 6 B2 2 8 2 9 .9 8 2 32!3 " 5"44+.+ +3 52 " 2 3 B2 6 " 8 .!23 2 +8 92D+ 259 +D+3 3 8 5 " 1"8 .!23 2 + 8 36 2 ! 89 B+! 52 2 3 +!B2 D+!8 +8 + 9" 82 3 " + 9 3!+3 2 3 8 J 6 D+ 8 3+ 8 54 3 .' $;& @"B+ 2 + 3+3 4+5 !+8 3 ! .' $<#& 9+ 8 2 5" 8 8 +3 " $P 1!" +88"!8 @ 9 2 2D+!2. 2 2 24 8242!6 " B"!+ 92 ^ $### 2 3 &> 4+5 !+!8 2 3 3+B" 8 !2 "!8 9+ 6+2!!8 +J1+ 3 !+ @28 ^P# Q<> 8 +!4 . " @9 59 8 B ^$; 0P# 8 +!4 .' @28 .!2 +3 76 9+ ."D+! B+ 9 8 + 3"@B+ 928 7++ 5!+28+3 $<#> "' ^QQ P##

B26 7+ 233+3 92 9+ 8 !24 2) 3 +59 "4". 524 8+ B8 5" B"!+ 92 ;P0 ### D 8 "!8 2 2446 92 9+ !++ 1 74 5 4 7!2!6 3+!' 9+ 8 2 +12! B+ 74 5 8 ! 5 " 928 +2!46 Q## ### D"4 B+8 92 9+ +@ 59+44 7!2!6 5" 2 8 9+ 7+8 5"44+5C " " 8 !24 2 7""A8 9+ @"!43 2 3 92 9+ 2 " 24 2! .244+!6 2 63 +6 928 12 C .8 2 3 "7-+5 8 " 2! +8 B2 +3 2 2 D24 +" ^ $;# ### 8 +!4 .

59""4 4 7!2! +8 859""4 72 A8 2 3 859""4 .2!3+ 8 1426 B1"! 2 12! 8 9+ 4 D+8 " 9+ 59 43!+ @9"" 2 + 3 9+ 8 2 +859""48 9+ "43+! 7"68 2!+ 3! 44+3 28 523+ 8 2 3 2!+ 2 .9 9+ 2! " ! 4+ 89"" . @ B B .' 8 248"' 2 .9 @9+!+D+!1"88 74+ 5" +5 " @ 9 9+ 859""48 D+!6 4 D+46 81 ! " 1!".!+88 928 @ 9 9+ 428 +@ 6+2!8 2A+ 1"88+88 " " 9+ +3 52 " 24 @"!43 32 ." " 9+ @9"4+5 !"B 9+ 255+88 " " ! + +!' "2!3 28 1+!B2C + 9+23 " 9+ 3+12! B+ " 1 74 5 8 ! 5C " 8 244 9+ 5"4" +8 9 8 3+12! B+ 8 3+!' 9+ 24 5" !" " 2 B 8 +!' "!' 1 74 5 8 ! 5 " @9"' 8 "B 2 +3 76 9+ 8 2 +' 1!+B +!' 2 3 @9"8+ + !+ " " 5+ 3+1+ 38 1" 92 " " 9 8 12! 6 2!4 2B+ 9+ 3 !+5 "!' " +3 52 " "!' 3+!' 8+5!+ 2!6 "!' 1 74 5 8 ! 5 " 8 9+ 1+!B2 + 9+23 " 9+ 3+12! B+ 8 7-+5 "' 9+ B 8 +!' @9"' !+1!+8+ 8 8 12!4 2B+ 2!6 2 3 852 +!+8 8 (5 "! 2 ? @ 4 7+ +5+882!6 "' 592!C 25 +! !+ (5 "! 2 +3 52 " 2 8 59 4+ . 9 8 5+ 8 .+ +!24 " 4 +!+8+B74+8 +3 52 " +@ " 9 24+8 9 8 5"B12! 8" 9+ 868 +B " (5 "! 2 +3 52 " B 8 7+!+5".C !+3 "' 7+ +R 24 2 3 8"B +!+81+5 8 8 1+! "!' "' 92 " " +@ " 9 24+8 " 2 " 859""48 " 2 D"52 " 24 592!25 +!' 2!+ 9+ ! 2 56 7" 9 5"4" +8 7 B"!+ 1!25 524 1!".!+88 8 7+ .' B23+ @ 9 9+B 1 5 "! 2 9+ +R 1B+ "!' 9+ !2 .' " +259+!8 8 248"' 8 1+! "!' 9+ 8" 9+! 8 2 +' @9 59 928 4 A+ +@ " 9 24+8 2 !+ "!B .' 3 !+5 "!' " +3 52 " ! !2 A 2 + 9+ 2 9"!' " 2 B1"! 2 !+1"!' 1" "78+!D2 " 8 B23+ 3 ! .' 2 " 4 5 24 D 8 "' !"1+ 2 3 B+! 52 (5 "! 2 8 7+9 3 +@ " 9 24+8 1 9+ +8 274 89B+ " " 5+ !24 3 8 ! 5 8 2 + 859""48 9+!+ 2!+ (5 "! 2 2 1!+8+ M$<#>G Q#>> 8 2 +859""48 92D .' 2 " 24 + !"44B+ " Q#; E 0>Q 1 1 48 9+ 8 2 + +J1+ 3 !+ "!' $<#0 @28 28 "44"@80 "!1! B2!6 +3 52 " ^&&P =#;' 8 +!4 .F "!8+5" 32!6 +3 52 " ^P>0=' 8 +!E

;#;

4 .F "!' +59 524 +3 52 " ' ^QQ ;QQ' 8 +!4 .F "!' D+!8 6 +3 52 " ' ^Q$ ### 8 +!4 . ' 9+' +J1+ 3 !+8 1" '8+5" 32!62 3' +59 524 +3 C 52 " ' 2!+' 7+ .' !21 346'2 . B+ +3' 9+' +JC 1+ 3 !+' 1" ' D+!8 6 +3 52 " ' B+!+46' !+1!+8+ 8 2 ' 2 24 .!2 ' ' 2 3' " ' 9+' @"!A' " ' 9+ D+!8 6 " ' +47" ! +'@9 59' 8 " ' "' 7+' !+.2!3+3' 28 2' 8 2 +' D+!8 6 ' 24 9" .9' 9+' ."D+! B+ ' 5"44+.+' "!' 9+' !2 ./ " ' +259+!8 8 2 4 4 2 +3 "'

" 9' 8 !24 2 ' ? ' ! .' $<#0 9+!+' @+!+' ' 244 0Q$ 859""48 ' "1+!2 " ' ' " 9' 8 !24 2 ' 92D .' 2 ' 2D+!2.+' 32 46'2 + 32 5+' ' 1 74 5' 859""48' " ' ;$;&P' 2 3' ' 1!" 38 " 24 859""48' &=<&' . D .' 2' " 24 2'"V+!2.+' 2 + 32 5+' " ' ;0 >&$' 9+' B7+!' " ' +259+!8 +B 14"6+3' @28 $;><' " ' @9"B' =$<' @+!+' B24+' 2 3' <0# +B24+' 9+' +'5"8 ' " ' +3 52 " 24 "1+!2 " 8 " ' 9+' 2 +' @28' ^$P# $PO' 8 +!4 .

+8 +! ' 8 !24 2 ' ? ' $<#0' 9+' 2D+!2.+' + !"44B+ ' ' 9+' 1 74 5' 859""48 @28' Q< &0<F 9+' 2D+!2.+' 2 + 32 5+' Q= <P#' "!' >= #0' 1+!' 5+ ' 9+' 5"B1 48"!6' 2.+8 "!' 2 + 32 5+' 2!+' !"B' &' "' $=F 7 ' > >' 1+!' 5+ ' " ' 9+' 59 43!+ ' 2!+' 3+!'&2 3' &;'1+!'5+ '"D+!'$=' ' +@' " 9' 24+8 2' 8 44 9 .9+!' 1+!5+ 2.+' 8 " 3' " ' 59 43!+ ' "D+!' $=' 2B+46' < ;' ' 244 9+!+' @+!+' ;<P 859""48 "1+ ' 3 ! .' $<#0' 9+!+' @+!+' 0=='!+. 42!'23 4 ' +259+!8 '>&1 1 4 +259C +!8' 2 3' P& 8+@ .' B 8 !+88+8' ' 25 +'3 C 5 4 6 ' +8 +! ' 8 !24 2' 2 3' 244 9+' 812!8+46' 1"1 42 +3' 3 8 ! 5 8 ' 9+' 8 !24 2 ' 5"4" +8 8 "' 3' +259+!8 "!' 9+' 5!+28 .' B7+!8 " ' 8B244 859""48 ' 9+' 2D+!2.+' 8242!6' "!' 244 23 4 ' +259+!8 ' $<#0 @28' ^$=< ' 9+' " 24 8 2 +' 3 87 !8+B+ ' "!' +3 52 " ' 3 ! .' 9+' 2 5 24 6+2!' !"B' : 46' $' $<#&' "' : +' ;#' $<#0' @28' ^$&> 0P;

++ 842 3' ?' ' $<#0 9+!+' @+!+' Q;<& +259+!8 +B 14"6+3' ' 9+' 8 2 +' 859""48 ' _ ++ 842 3' @9 59' B7+!+3' 24 ".+ 9+!' $#<#' 54 3 .' 1!"D 8 " 24 859""48 ' 9+' .!"88 3+C 12! B+ 24 +J1+ 3 !+' @28' ^;=Q &##' 8 +!C 4 .' ' 9 8 8 B' ^;$; 0<Q' @+ ' "' 1! B2!6' +3 52 " ' ^'&$>Q' "' 859"42!89 18 2 3' +JC 9 7 " 8' ^0###' "' + 3"@B+ 8 "' .!2B B2!' V859""48' ^00=<' "' +59 524 +3 52 " ' 2 3' ^Q#0#' "' .!2 8 ' 2 3' " ' 859""48' " '2! 8' 9+' 2D+!2.+' 32 46'2 + 32 5+' "!' 244 859""48 ' 8 2 +' 2 3' 1!"D 8 " 24 ' 2B " +3' "' && >=<' ++ 8C 42 3' 8 "@' 1! 5 12446' "55 1 +3' @ 9' 9+' 1!"-C +5 ' " ' 2' D+!8 6' 2 ' ! 872 +' 9+' 211" C B+ ' " '2' 8 5 + ' B7+!' " ' +!2 ' +259+!8 "' 1+ + !2 +' 9+' D28 ' 8125+8 " ' 9+' +! "!' 9+' +8 274 89B+ ' " ' 5" 2 " ' 54288+8 ' 2 3' 9+' B1!"D+B+ ' 2 3' +J + 8 " ' " ' +59 524 +3 52C "

28B2 2' ? ' 4 9" .9' 8+12!2 +3' !"B' 9+' 8 !24 2 ' 5" + ' 76' @2 +!' 28B2 2' 8 " +' " ' 9+' 8 2 +8 " ' 9+' 8 !24 2 ' +3+!2 " ' !C .' 9+' 6+2!' $<#& 9+!+' @+!+' ' 244 ;P# 859""48' [' "1+!2 " ' 9+' " 24 B7+!' " ' 59 43!+ ' 2 .9 ' ' 9+8+' 859""48' 3 ! .' 9+' 6+2!' @28' QQ &QQ' 244"@2 5+' 92D .' 7++ ' B23+' "!' 9"8+' + !"44+3' ' B"!+' 92 ' " +' 859""4 3 ! .' $<#& 9+' 2D+!2.+' 32 46' 2 + 32 5+' @28' $; 0;#' 9 8' 2D+!2.+' 8' 5" 8 3+!+3' D+!6'4"@F B"!+"D+!' 9+' 255"B B"32 " ' ' 9+' 859""48' 8' 4+88' 23+C R 2 +' 92 ' ' " 9+!' 8 !24 2 ' 8 2 +8 ' 2 3' 4 4+' 2 +B1 ' 8' B23+' "' + "!5+' 9+' 542 8+8' ."D+! .' 5"B1 48"!6' 2 + 32 5+' 9+' " 24 B7+!' " ' +259+!8 " ' 244 !2 A8' ' $<#& @28' P=& ' 9+8+' $Q >' 1+!' 5+ '@+!+' 1 1 4 +259+!8 ' 9+' " 24 +J1+ 3 !+' " ' 1! B2!6' +3 52 " ' "!' 9+' 6+2!' $<#& @28' ^P0 >$<' 8 +!4 .' @9 4+' 2 ' 2B " ' " ' ^Q&P#' @28' 3+D" +3' "' +59 524 +3 52 " 44+!' "!B2 " ' B26' 7+' "7 2 +3' !"B' 9+' 2 24 !+1"! 8' 88 +3' 76' 9+' B 8 +!8' "!' 1 74 5' 8 ! 5 " ' ' 9+' 8+D+!24 8 2 +8

' '

' ' ? 8 ! 2E .2!6' 8' 2' 5" 8 " 24 B" 2!596' 5"BC 1! 8 .' @"' 8 2 +8' + !+46' 3+1+ 3+ ' " ' +259' " 9+!' 4"52446' 7 ' +3' 9!" .9' 9+' 3+ 6' " ' 9+' 8"D+!+ . ' 2 3' 2 2 !8' 5"B B" ' "' 7" 9 8 ! 2' 5"B1! 8+8' $=' 1!"D 5+8 '@ 9' 2 ' 2!+2' " ' $$P <#;' .4 89' 8R 2!+' B 4+8F 1"1 42 " ' Q& $P# 0#>' M5+ 8 8' " ' $<##G ' .2!6' M+J54 3C .' !"2 2' 2 3' 42D" 2C 928' 2 ' 2!+2' " ' $#< ##0' .4 89' 8R 2!+' B 4+8F 1"1 42 " ' $& 0Q$ PO=' M5+ 8 8' " ' $<##G ' 9+' +3 52 " 24 868 +B' " ' .2!6' @ 44 7+' !+2 +3' ' 2' 8+12!2 +' 2! 54+ 8 "! 524 +D+4"1B+ ' ? ' 9+' 9 8 "!6' " ' +3 52 " ' ' 8 ! 2' 3+248' " ' V@ 9 9+' 3+D+4" 1C B+ ' " ' 2' 8 .4+' !25+' 7 ' " ' 8+D+!24 !25+8' 4 /D .' ' 3 +!+ ' +!! "! +8' @9 59' 92D+' 7++ ' +3' 3+!' " +' ."D+! B+ ' ' 9+' 5" !8+' " ' 8+D+!24 5+ ! +8' 9+' +2!4 +8' 859""48' ' @92' 8' "@' 54 3+3' ' 8 ! 2 ' +!! "!6' @+!+' 9+' 52 9+3!24 2 3' B" 28 5' 859""48' : :" "&" ' 9+' 334+' .+8' 9+' +8 274 89B+ ' " ' 9+8+' 859""48' 32 +8' !"B' 9+' 7+. .' " ' 9+' + .9 9' 5+ !6' 2 3' 4 9+' 9 ! ++ 9' 5+ !6' 9+6' 2 "!3+3' 9+' " 46' B+2 8' " ' 8 ! 5 " ' ! .' 9 8' 1+! "3' 12! 89' 859""48' @+!+' +8 274 89+3' 7 ' 9+6' " +!+3' 4 4+' 8 ! 5 " ' +J5+1 ' ' 8 . .' 2 3' ' 9+' 52 +59 8B' @9 59' @+!+' !+R !+B+ 8' " ' 9+' 9 !59' D+!8 +8' @+!+' 248"' " 3+3' " +' 2' !2. +' :" "&" ' $;=>' 2 3' " +' 2' (+ 2' #:" "&" ' $;&P' 9+8+' @+!+' B "3+4+3' ' .+ +!24' 2 +!' 9+' D+!8 6' " ' 2! 8' V@ 9 9+' 25 4 +8' " ' 2! 8' 9+"4".6' 42@' 2 3' B+3 5 + ' 9+' B+' " ' 9+' + "!B2 " ' M$PQ=G' 12! 89' 859""48' 3+!' 9+' 3 !+5 " ' " ' 9+' 2 9"4 5' 9 !59' 923' 7++ ' +8 274 89+3' ' B2 6' " ' 9+' "@ 8' 2 3' D 442.+8' "44"@+!8' " ' 2! ' 9+!' @+!+' 7 +!46' "11"8+3' 2 3' 2 +B1 8' 76' +259+!8' " ' 9+' +@' 2 9' "' "1+ '859""48' @+!+' 9+' "5528 " ' " '8 ! +' 9+' :+8 8' M. 2G' " ' 9+' " 9+!' 92 3' @+!+' + 5" !2.+3' "' "1+ '859""48' @9 59' 2 !2446' 8 !+ . 9+ +3' 9+' 2 9"4 5' 9 !59' 9 8' 8 ! +' .!+@' 7 +!' ' 8 ! 2' 2 3' 2446' 5 4B 2 +3' ' @2!' @9 59' @28' 3+ ! B+ 24 "' 244 859""48' 2 3' 3 828 !" 8' "' 9+' !" +8 2 8' M$&Q#G' +!' 9 8' @2!' 9+' +43' " ' 8 ! 5 " ' @28' 1!25C 52446' 4 B +3' "' 9+' 2 9"4 5' 9 !59' ! . 9+' 8+D+ ++ 9' 5+ !6' 9+' 859""48' " ' 9 .9+!' 8 ! 5 " ' @+!+' ' 9+' 92 38' " ' 9+' :+8 8' 2 3' 1! B2!6' 8 ! 5 " ' 8 44 5" +3' 59 + 46

;#=

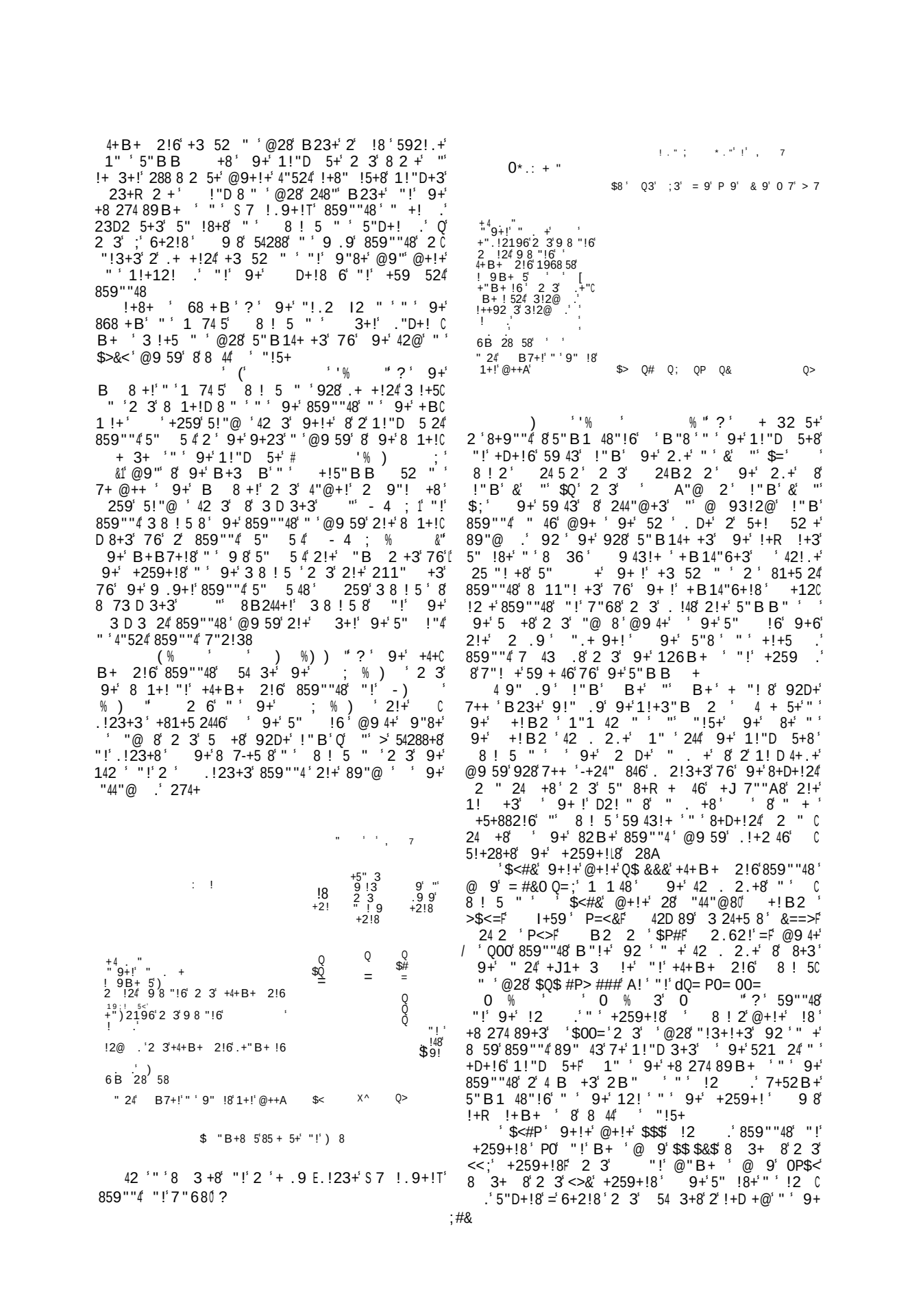
"'!+4 . " 8 +259 .'2 3 9+52 +59 8B !+B2 +3 3+! 9+ 8 1+!D 8 " " 9+ 9 !59F 23D2 5+ 9"@+D+! @28 B23+ 859""48 +8 274 89+3 76 9+ 2! 8 8 #:" "&1 @9 59 7+8 3+8 9+ 52 +C 59 8B !+23 . @! . 2 3 2! 9B+ 5 @+!+ 2 .9 1+5 24 859""48 "! 9+ "7 4 6 2 3 859""48 "! B 4 2!6 !2 . @+!+ "1+ +3 8"B + " 9+5 +8 3 ! . 9+ !8 924 " 9+ + .9 ++ 9 5+ !6

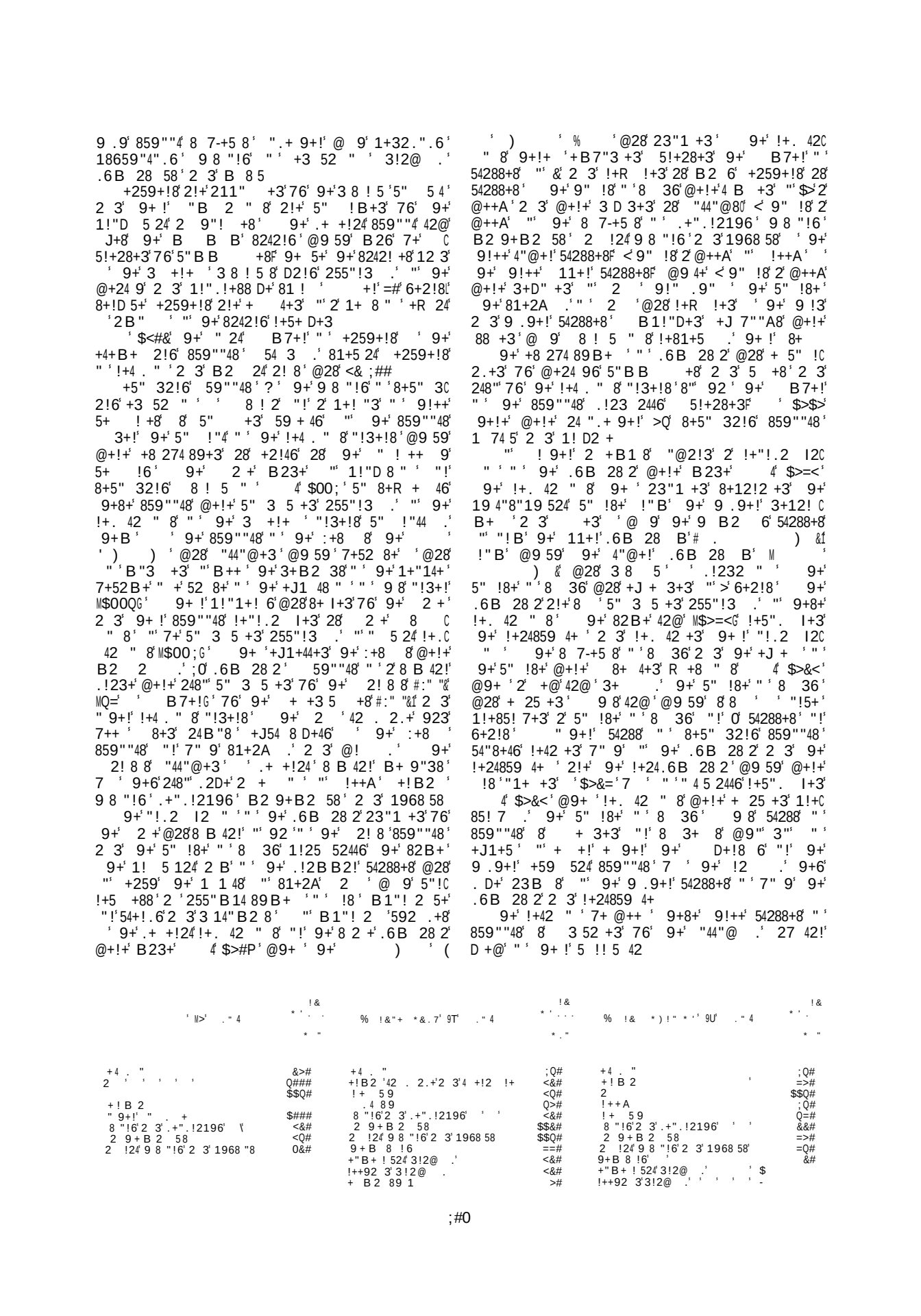
"@ "$00# 9+ ."D+! B+ 923+J+!5 8+3 "5" !"4 "D+! 859""48 ! 9+! 92 "+ "!5+ 9+ 59 !59 !+. 42 " 8 "25 28 2!7 +! 8+ 4 . 3 81 +8 2 3 "1+!B 9+ +259 . " 9+ 1"1! 859""48 " 9+! 92 9"8+" 9+ !+4 . 8 "!3+!8 9+ !8 3+5 8 D+ 8 +1 "C @2!3 9+ "!B2 " " 2 8 2 + 868 +B " +3 C 52 " @28 2A+ 3 ! . 9+ !+ . " 2! 2 9+!+82 :" "&" 9+ 3+ +2 " 9+! 2!B +8 76 !+3+! 5A 9+ !+2 M$0&QG 2 3 9+ +J1 48 " " 9+ :+8 8 M$00;G 7" 9 5" 3 5+3 "' 9 8 !+C 8 4 +@+3 52 " 42@ + 25 +3 $00=!1!"C D 3+3 "!2 5+ !24 859""4 5"B B 88 " #') (; & @9 59 89" 43 +J+!5 8+ .+ +!24 5" !"4 "D+! 244 859""48 2 3 2 23B 8 !2 D+ 5" 5 4 +259 " 9+ 1!"D 5+8 9+ 42@ ! 9+! 1!"D 3+3 "! 9!++ 54288+8 " 859""48 ; % 1 "! ! D 24 859""48 M28 9+6 @+!+ 5244+3G /) % 1 "! 9 .9 859""48 2 3 "!B24 859""48 9+ ; %) @+!+ "' 7+ "1+ +3 +D+!6 12! 89 "! 8 ! 5 " !+4) " B"!248 !+23 . @! . 2 3 2! 9B+ 5F 9+ +J1+ 8+ "' 7+ 7"! + 76 9+ 5"B B +8 2 3 9+ B2 "! 24 4"!38 .9 859""48 @+!+ !+R !+3 +D+!6 5 !54+ "! 3 8 ! 5 "! 8 ! 5 " .+".C !2196 2 3 9 8 "!6 5"B1"8 " 2! 9B+ 5 2 3 .+"B+ !6 2 3 9+ +4+B+ 8 " 2 F 2 3 "!B24 859""48 8+!D .' 9+ @" "43 1 !1"8+ " !2 .' +259+!8 2 3 " B"3+4 859""48 9+ 521 248 " 9+ 5!"@ 42 38 +4 . " 8 8 ! 5C " @28 4+ " "' 9+ 54+!.6 9+ 8242! +8 " 9 .9 859""4 2 3 "!B24 859""4 +259+!8 @+!+ J+3 2 3 9+ 5" !6 +259+!8 @+!+ !+5"BC B+ 3+3 "' 9+ B2 "! 24 4"!38 2 3 9+ 5"B B C +8 "!2 3 2 3 @+!+ 248"' 1+!B +3 "' + .2.+ " 9+!"55 12 " 8 1 74 89 .'9" 8+ "! 859""47""A8 @28 +8 274 89+3F +J 7""A8 2 3 B+ 9"38 " 8 ! 5 " 2 3 3 85 14 +@+!+ 1!+C 85! 7+3 9+ 859""4 2.+ @28 !"B &" "$Q 6+2!8 326 859""48 "! 9+ 7+ + " 59 43!+ @9" @+!+ "D+!$Q 6+2!8 " 2.+ 2 3 " 2 + 3 .' 859""4 2 3 "! 211!+ 5+8 +81+5 2446 @+!+ "1+ +3 8 2 !+8 4 " 9+ !+ "!B B2 6 +@ 859""48 @+!+ +8 274 89+3 2 3 2 .+ +!24 3+8 !+ "! +3 52 " @28 2@2A+ +3 9!" .9" 9+ 1!"DC 5+8 $00P "9+B 2 923 27" $### 859""48 @ 9 ;# ### 1 1 48 $0>< QQ=' 859""48 @ 9 27" $&P ### 1 1 48 $00P 29!+ 923 27" $# ### 1 1 48 2 3 $0>P 27" &0 ### 1 1 48

9+ B"D+B+ 24!+236 8 2! +3 @28 5" +3 3+! 9+ !+ . " :"8+19 M$0&PE$0<#G 5 C ." 9+ 23D 5+ " 9+ 859""4 5"B B 88 " 9+ 82 5 " +3 B+28 !+8 @9 59 B23+ 2 + 32 5+ 2 859""4 5"B1 48"!6 " 1+ 24 6 " +0 !+4 +D+3 +259+!8 !"B B 4 2!6 8+!D 5+ 2 3 J+3 2 B B B 8242!6 2 6 3+ 5 + 56 7+ .'8 114 +3 !"B 9+ 859""4 3F 2 3 @92 8 " B"!+ 5" C 8+R + 5+ 9+ .!2 +3 !+4 . " 8 4 7+! 6 "' 9+ !" +8 2 8 M$0>$G @9 59 + 274+3 9+B "' +8 274 89 859""48

"@2!3 9+ 54"8+" 9+ 5+ !6 9+ + +5 8 " 9+ 1"4 524 B"D+B+ 8 !2 5+ @+!+ +4 " 9+!5" ! +8 " !"1+ 9+ B+28 !+8 2A+ 76 !2 5 8 "' 82 +. 2!3 9+ +B1 !+ @9 59 5" 8+R + 46 !+8 ! 5 +3 9+ !++3"B" 9 8 8 7-+5 8 + 3+3 2 9+ 82B+ B+ "' 4"@+! 9+ 3+248 " 9+ 859""48 8 23D 8+! " + E 92 B2 2 +3 9"@+D+! 92 9+ "7-+5 " 9+ ; %) @28 "' B2A+ 9+ 427"! . 54288+8 B"!+ 3 8 ! " 8 2 3 2B+ 274+ "' 9+ 42@ 2 3 92 +D+ 9+ 427"! .' B2 @28 5212C 74+ " 5" 3 5 .' 2 859""4 8 D +@8 52!! +3 @+ .9 28 211+2!8 !"B 9+ $ % ( )) % '%) #) ( ) $). % '% &1 + 25 +3 $>#P "' 592 .+ @28 B23+ 9+ .+ +!24 142 " 8 1+!D 8 " "! 9+ 8 2 + 2 3 5!"@ 42 38 7 9+ ,) 1!"D 3+3 "! 3 8 ! 5 8 1+!D 8 " 76 9+ 54+!.6 " 9+ 3 8 ! 5 8 @9"' !+1"! +3 "' 9+ 7 89"18 "! 5" 8 8 "! 24 5" 5 4 2 3 248"' "' 9+ B2.8 !2 +8F 2 3 1425+3 9+ 12! 89 859""48 3+!3 !+5 " " 9+ !+81+5 D+ 128 "!8 " 9+ 12! 89 @9 59 9+ 859""4 @28 4"52 +3 9+ 8 7-+5 8 " 8 ! 5 " "! 9+ ; %) @+!+ +J + 3+3 "' 54 3+ D"524 B 8 5 9+ 2 D+ 42 . 2.+ 2 3 B2 24 +J+!5 8+8 "@ 8 9+ 5" !8+ " 8 36 @28 +J + 3+3 8"' 92 Q# 9" !8 " 8 ! 5 " 2 @++A 89" 43 7+ . D+ 2 3 2 288 8 2 +259+! 1!"D 3+3 @9+!+D+! !+R !+3 9 43!+ " 9+ 1""!@+!+ "' 7+ 8 ! 5 +3 .!2 " 846 +259+!8 B 8 92D+ !+5+ D+3 2 4+28 ;' B" 98 "!B24 !2 .F 9+ !+. 42 " 8 3+ +!B +3 9+ ! B"3+ " 211" B+ 28 @+44 28 92 " 859""4 " 5+!8 2 3 248"' 81+5 +3 !+R !+B+ 8 "! 9+ 5" 8 ! 5 " 2 3 +R 1B+ " 859""49" 8+8 J5+1 "! B "!592 .+8 9+ 859""48 @+!+ 23B 8 +!+3 255"!3 . "' 9+) 4 $>=> ! .' 9 8 1+! "3 9+ 1!"D 5+ " 8 ! 5 " @28 +J + 3+3 " 2746 76 9+ " 3 .' 859""48 " !23+8 2 3 3 8 !6 9+ +59 524 9 .9 859""48 " (+ 2 !2. + !2 I 2 3 +B7+!.' @+!+ "1+ +3 !"B $>Q "' $>=0 9+ B7+!" 326 "!23 4 859""48 5!+28+3 !"B >>&0 "' $$ =;Q ! .' 9+ 82B+ 1+! "3 9+ B7+!" 8 1+! "!+4+B+ 2!6 859""48 5!+28+3 !"B Q&$ "' ; ; ; 9+ ; %) 1 !"B $= OP# "' $& >## 2 3 9+ 859""48 "!. !48 !"B $;>## "' QPP#

9+ 1"4 524 19+2D24 !"1+ $>=>4+3 "' 2 !+D"4 " 8 ! 2 2 3 9+ .+ +!24 3+B2 3 "!2 !+D 8 " " 9+ 5" 8 " 9+ +@+!+2 @28 B2!A+3 76 9+5!+2 " " 2 B 8 !6 " 1 74 5 8 ! 5 " !+1425 .' 9+ 859""4 5"B B 88 " @9 59 "! 9!++ R 2! +!8 " 2 5+ !6 923 5" !"44+3 859""4 2 2 !8 2 3 3+! 9+ 3 !+5 " " 9+ B 8 !6 +@+!+. 42 " 8 1+! 2 .' "' +4+B+ 2!6 859""48 @+!+ 1!"B 4.2 +3 $>=>' "44"@+3 $>=< 76 2 42@ "! 8+5" 32!6 2 3 8 1+! "! +3 52 "





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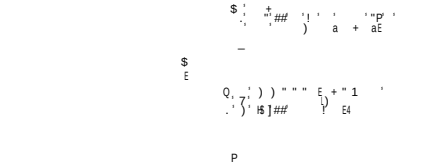

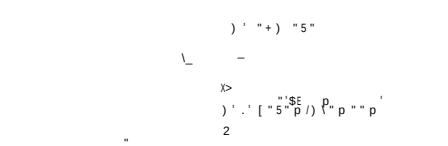

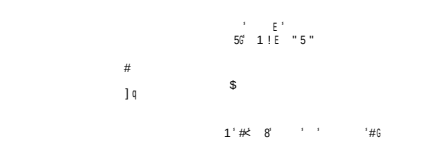

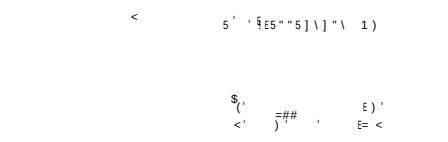

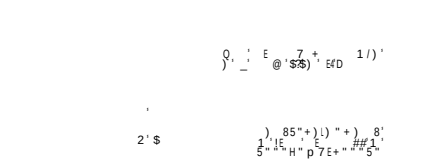

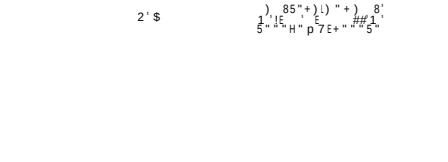

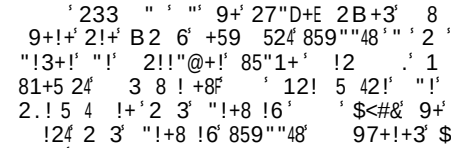

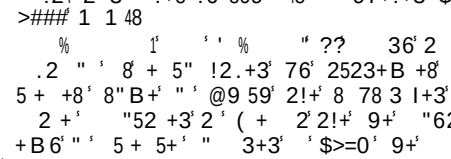

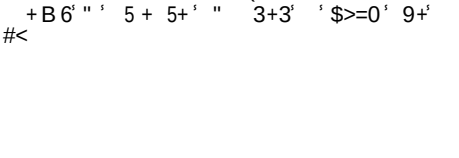

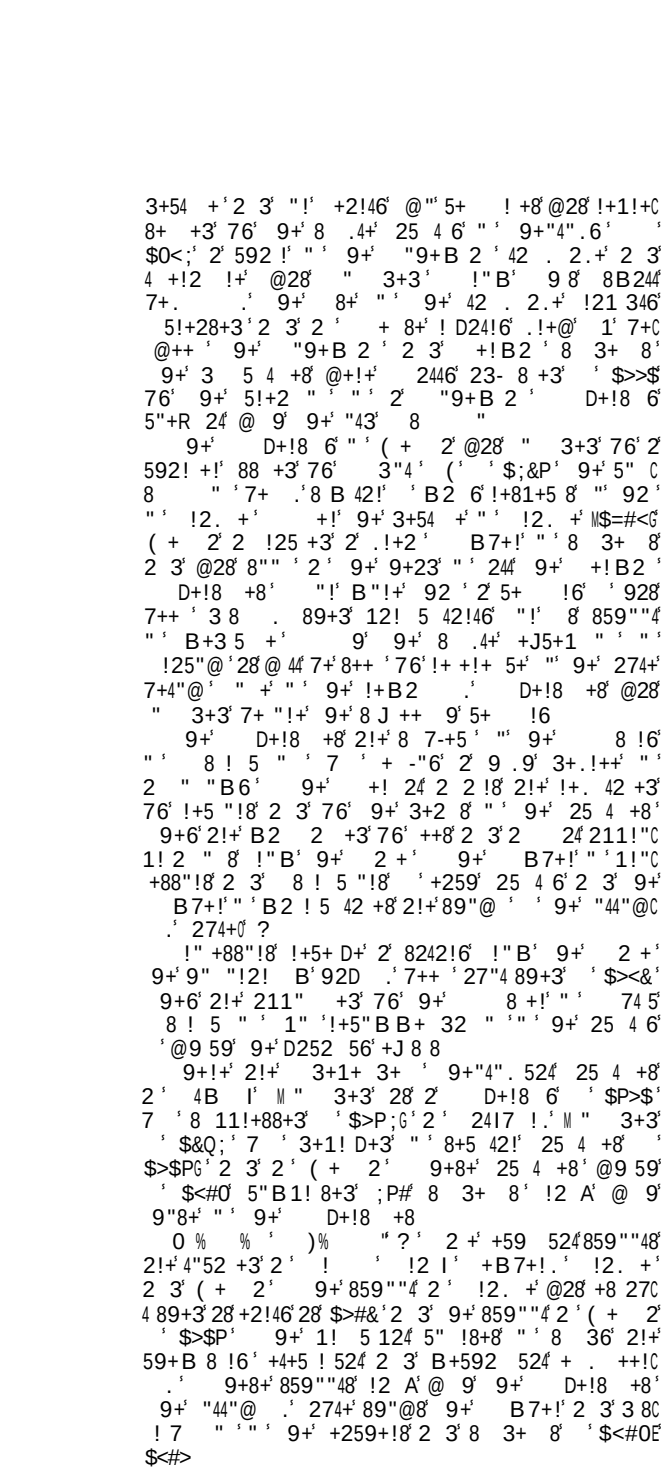

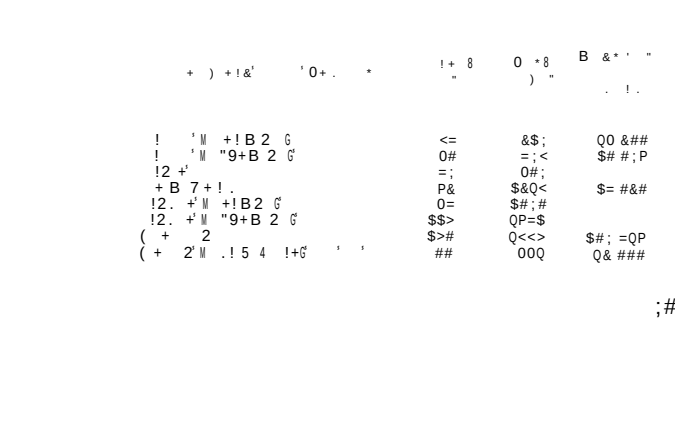

logical Society (1870), with 450 members, and the Royal Geographical Society (1856), with 2000 members and a library of 8000 volumes. At Prague are the Bohemian Academy of Science, Literature, and Art (1890), and the Royal Bohemian Society of Science (1770), the latter having 230 members and a library of 30,000 volumes. A Royal Academy (Polish) is located at Cracow, and a Society for the Advancement of Polish science at Lemberg. L. D. A.

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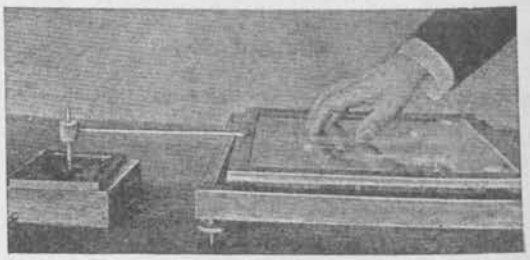
AUSTRIAN METHOD OF SUBTRACTION. —See SUBTRACTION.

AUTO-. — A general prefix which indicates any process initiated by the individual without external interference; such as autohypnosis. See SELF-INSTRUCTION.

AUTOMATIC MOVEMENT. — Certain movements of the body are executed without deliberation or choice. Thus one winks when any object moves rapidly toward the eyes; one throws out his hands to protect himself when falling forward. Such activities as these are due to an organized nervous mechanism, which was either inherited or has been so completely perfected through long use as to be entirely beyond the control of consciousness. Automatic activities are of the same general type as reflexes (*q.v.*). The distinction which is sometimes drawn between the two terms is that reflexes are regarded as somewhat simpler than automatic movements. Topics which should be consulted in the same connection are instinct and habit. The importance of distinguishing automatic movement in any educational discussion is that the complete perfection of a movement relieves consciousness so that attention may turn to the other phases of the situation and not be drawn to the details which would guide the movements. C. H. J.

AUTOMATISM. — Refers to forms of activity which arise in response to internal stimulation. These internally initiated forms of behavior are very frequently due to circulatory stimuli acting directly on the nerve centers, or to toxines contained in the blood.

See SOMNAMBULISM.



THE AUTOMATOGRAPH. — When in use a screen (not shown in the illustration) cuts off the view of the apparatus from the subject. The recording device, which may also be used separately, is shown in outline in half its full size. R is a glass rod which moves freely up and down in the glass tube T, which is set into the cork C. A rubber band B is provided to prevent the rod from falling through the tube, when not resting upon the recording plate.

AUTOMATOGRAPH. — An apparatus for the study of involuntary movements. One type is exhibited in the figure. For further discussion of records see MIND READING.

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AUTOMATON THEORY. — The physiological processes which are involved in reflex action (*q.v.*) seem to operate without any reference to conscious choice. The mechanism is accordingly said to constitute an automaton. When all action is reduced to reflex activity, as it is by some students of human behavior, the body is treated as an automaton, and no place is left in the theory of such writers for the recognition of consciousness as a cause. Consciousness is merely an added phenomenon without influence in determining bodily action. The automaton theory is not necessarily opposed to the principle that education can modify individual character. Even reflex activities can be

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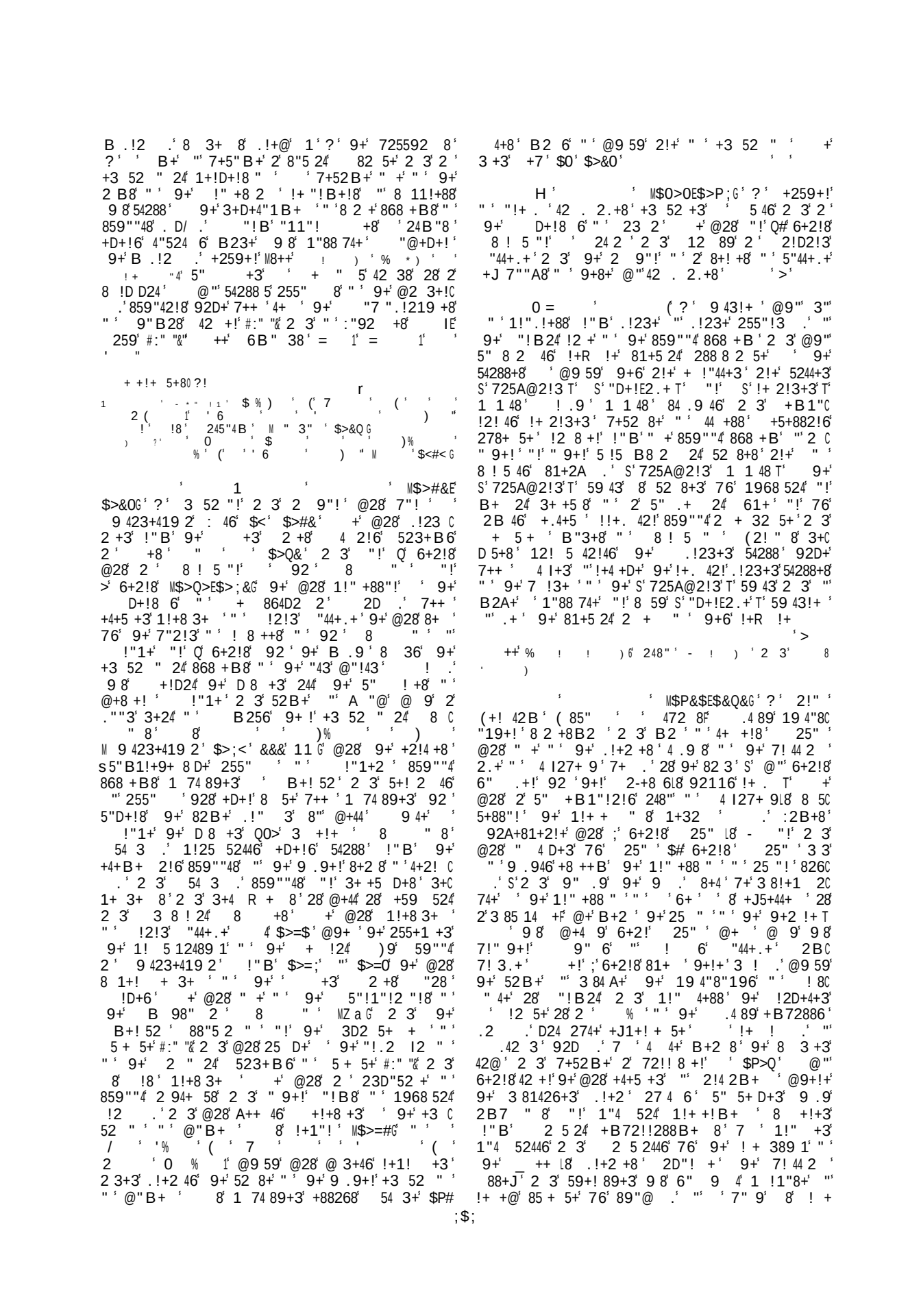


method and its grand mission. About 1592 he addressed a letter to his uncle, the prominent Lord Burleigh, asking for aid, and saying, among other things: "I confess that I have as vast intellectual ends as moderate civil ends; for I have taken all knowledge to be my province; and if I could purge it of two sort of rovers . . . (the frivolous disputers and the blind experimenters), I hope I should bring in industrious observations, grounded conclusions, and profitable inventions and discoveries; the best state of the province. This, whether it be curiosity or vain-glory, or nature, or (if one take it favorably) *philanthropia*, is so fixed in my mind as it cannot be removed."

The latter part of his political career was crowned with high honors, though shadowed by his prosecution of his friend and benefactor, Essex, for the crime of treason, and disgraced by the charge and confession, as Lord Chancellor, of bribery. In 1595, Bacon became Queen's Counsel; in 1607, under James, Solicitor-General; in 1613, Attorney-General; in 1617, Keeper of the Great Seal, as his father before him had been; in 1619, Lord Chancellor, with the title of Baron Verulam; in 1620, Viscount of St. Albans. Concerning the two notable charges against his character, his so-called treachery to Essex and his being guilty of bribery, it may in justice be remarked that the rash Essex had indeed been guilty of treason in championing the Scottish succession, and Bacon as the Queen's Counsel simply did his official duty in a difficult situation, though perhaps with unbecoming zeal. As to the bribery, it was common in those days for litigants to make presents to the judges, and it was not common to take notice of it. Bacon himself fairly observes: "I was the justest judge that was in England these fifty years; but it was the justest censure that was in Parliament these two hundred years." He also maintained that the bribe had never been in his eye when he gave judgment. But he was stripped of his offices, though allowed to retain his titles by a small vote, and Pope, with stinging satire, could write:—

> "If parts allure thee, think how Bacon shined;
> The wisest, brightest, meanest of mankind."

During his busy public life Bacon had used his leisure moments in writing. After his fall, some six years of feeble health were devoted to the same purpose. His death came from catching cold, while experimenting on the preservative properties of snow. His writings show the flexibility of the newly formed English language; they are very quotable, despite the heaviness of the thought and the compactness of the style; and they are very comprehensive and remarkable, making epochs, in fact, in literature, in science, and in philosophy. Though anticipating much of modern progress, Bacon did not anticipate the future of the English language. Conforming to the Renaissance custom of the time, he either wrote in, or else translated into, Latin all his main works.

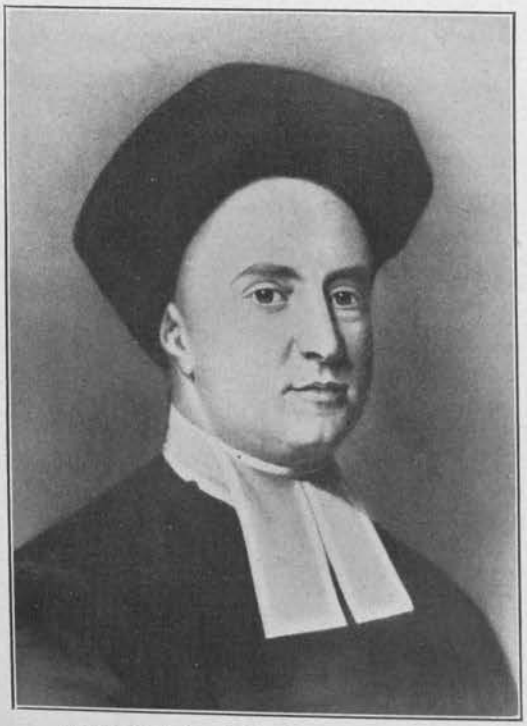
Bacon had a vast plan in his writings, which he was not able fully to execute. The plan was called the *Magna Instauratio*, the Great Renewal. In short, the *Great Renewal* meant that the new object of knowledge is not words, but nature; the new source of knowledge is not pure reason, but the senses; the new method of knowledge is not deduction, but induction; and the new aim of knowledge is not discipline, but power. The first part of the *Magna Instauratio* was published in 1605, and was entitled *Of the Proficience and Advancement of Learning*. This work refutes the objections to learning, and distributes knowledge into the three main divisions of history, poesy, and philosophy, thus making "a small globe of the intellectual world" and exhibiting its undiscovered countries. He rang the bell, as he said, to call the wits together. The second part of the *Magna Instauratio* appeared as the *Novum Organum* in 1620.

Title page to *Novum Organum* (1620).

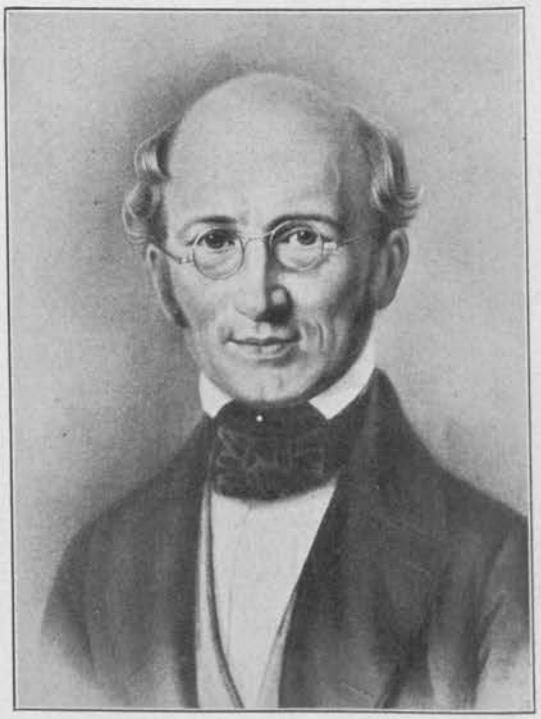
In the short preface to this work he contrasts "the method of cultivating the sciences," "the anticipation of the mind," with "the method of discovering the sciences," "the interpretation of nature." In sum, the one is deduction, the *Organum* of Aristotle; the other is induction, the *Novum Organum* of Bacon. The first aphorism of Book I gives the animating spirit of the whole: "Man, as

Francis Bacon (1561–1526). (See p. 313.)

Alexander Bain (1818–1903). (See p. 318.)



George Berkeley (1684–1753). (See p. 365.)



Frederick Eduard Beneke (1798–1854). (See p. 362.)

A Group of Philosophers, Contributors to Education.

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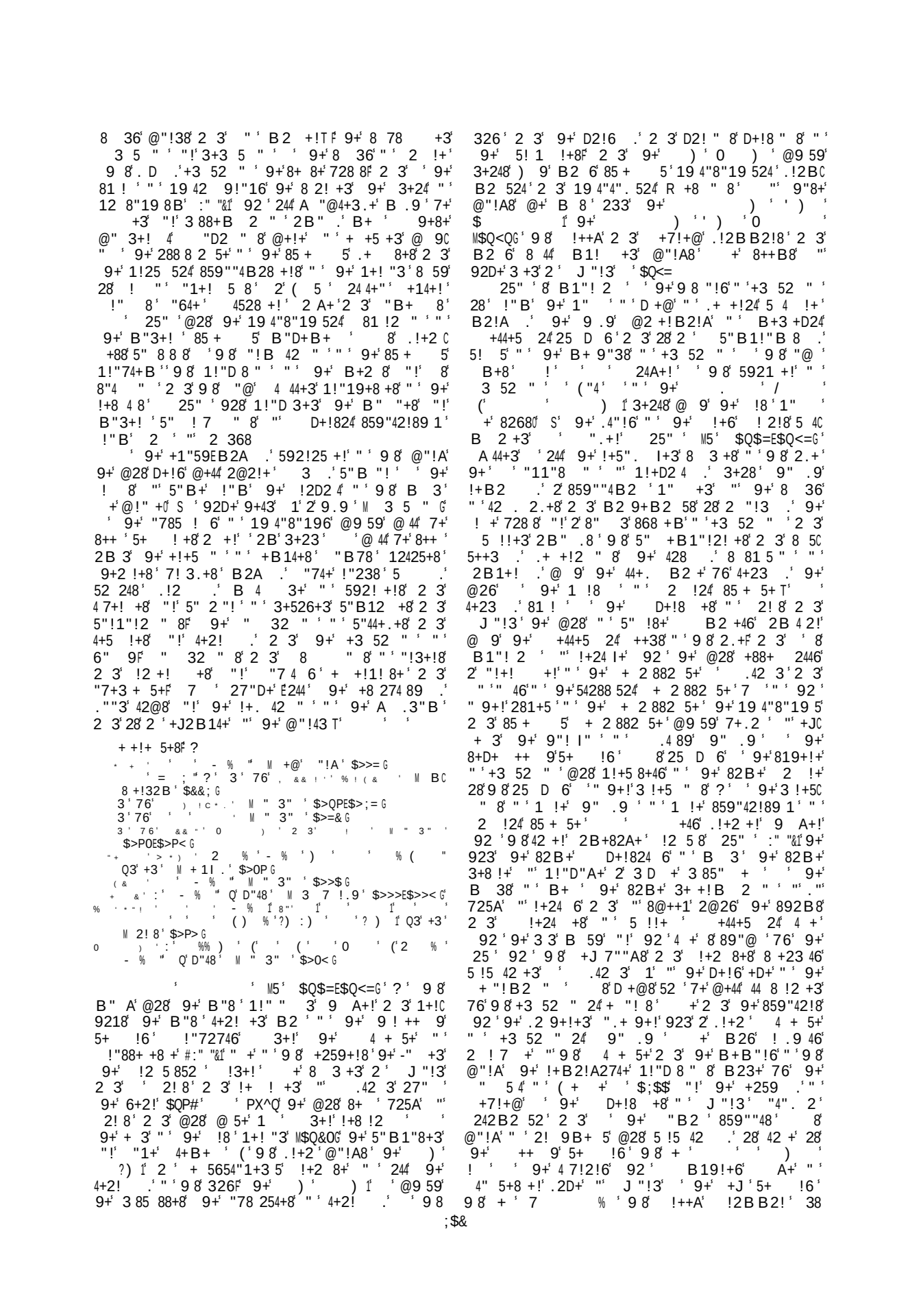

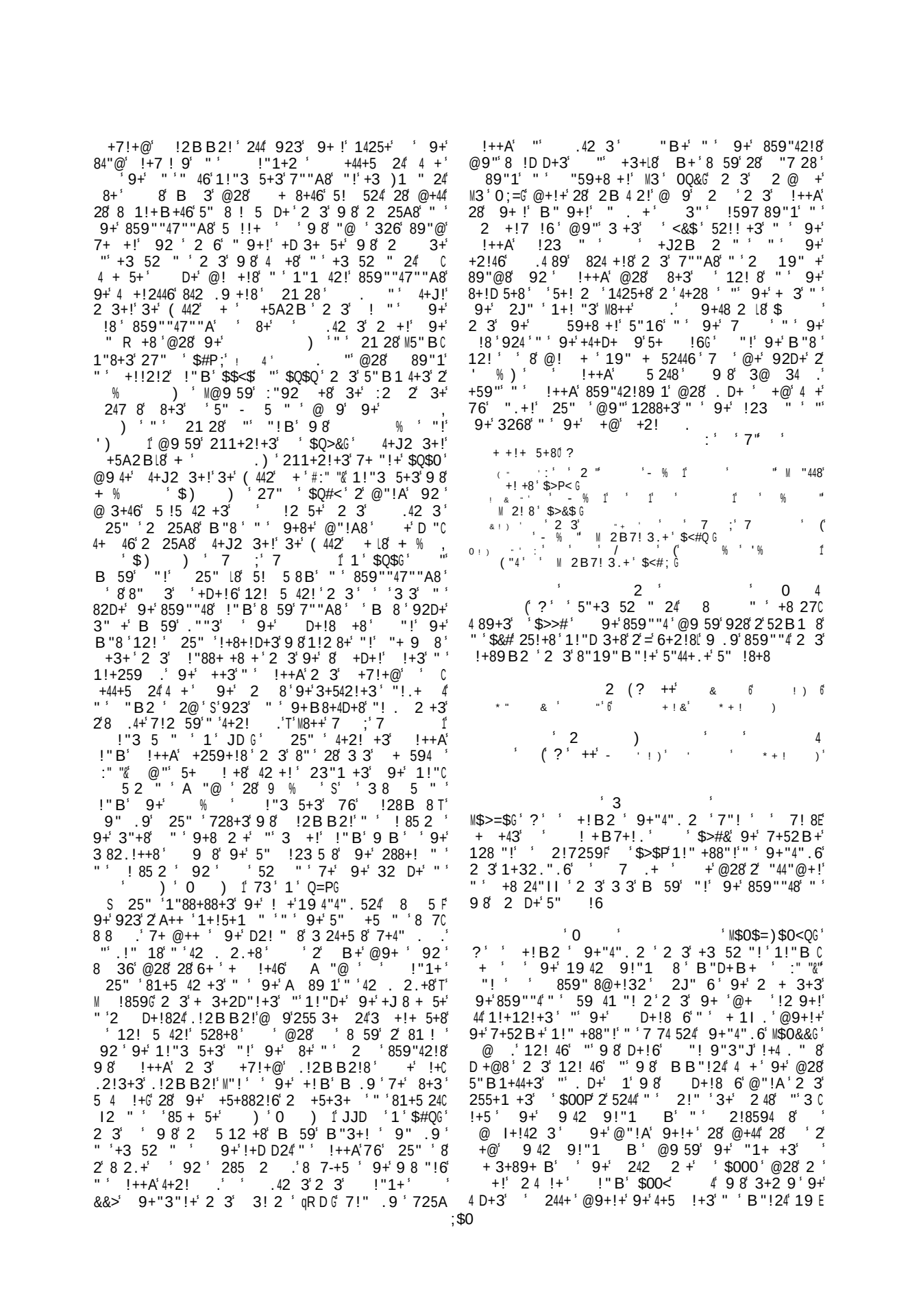

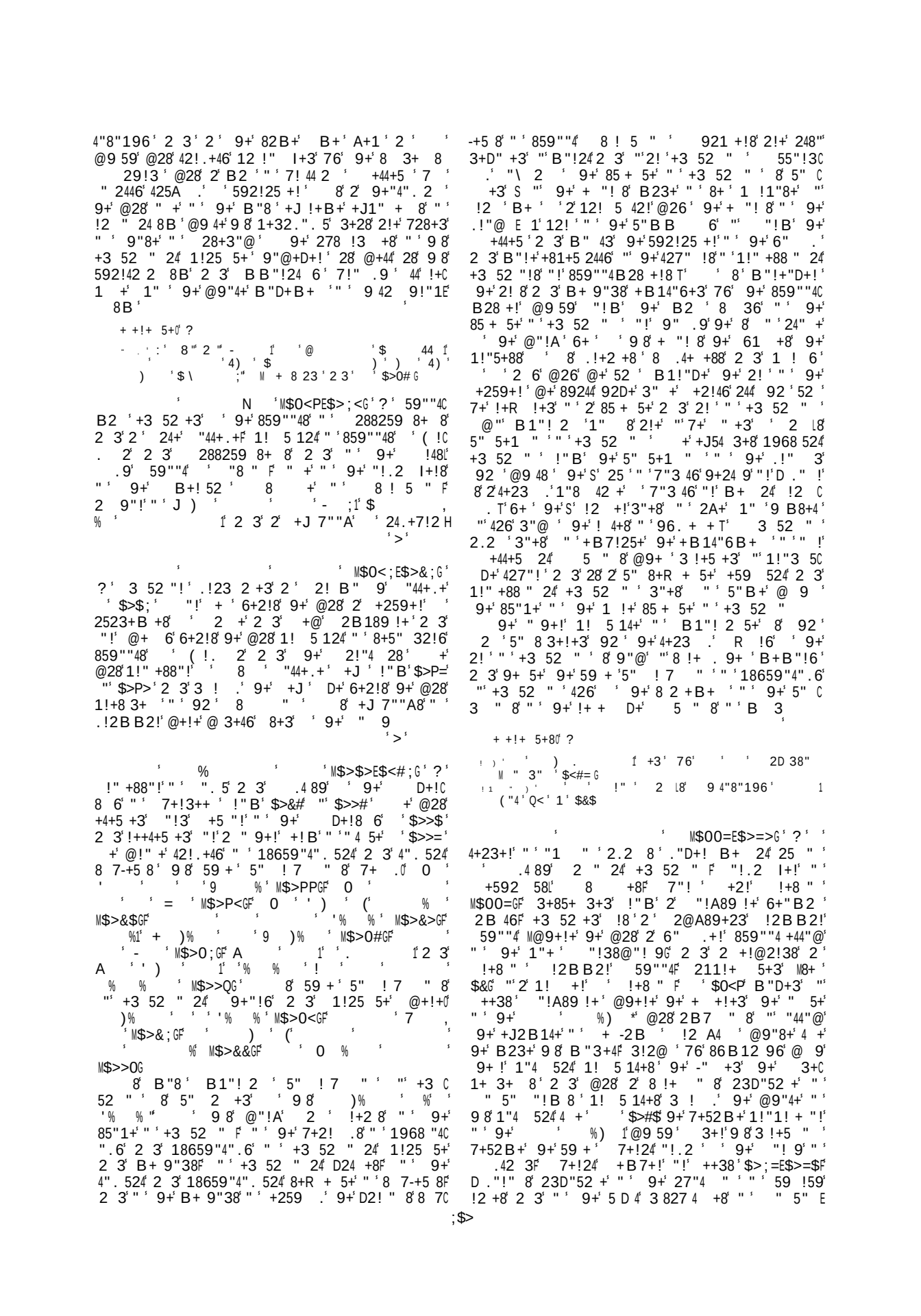

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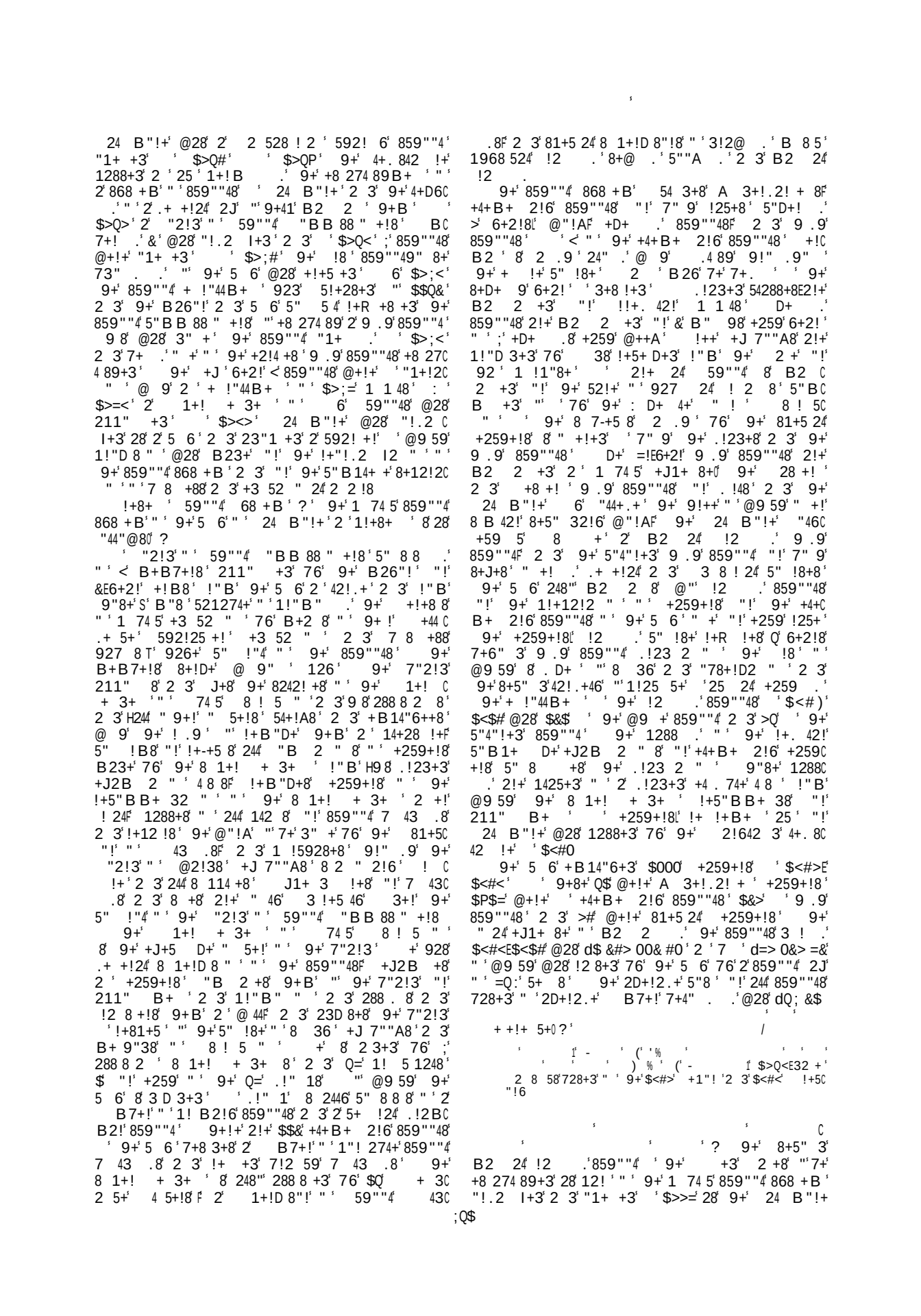

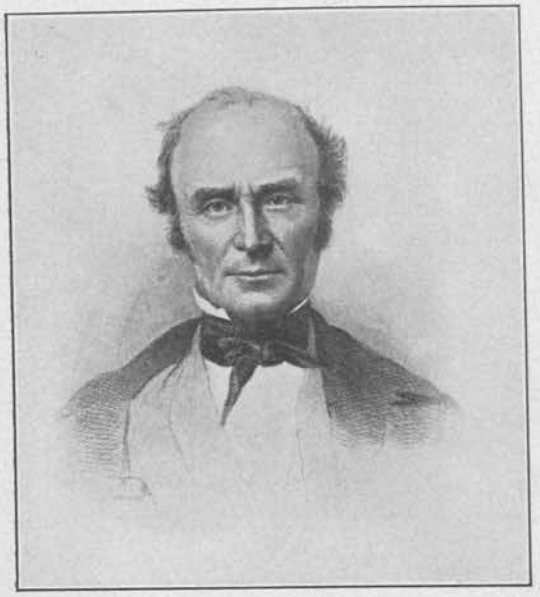

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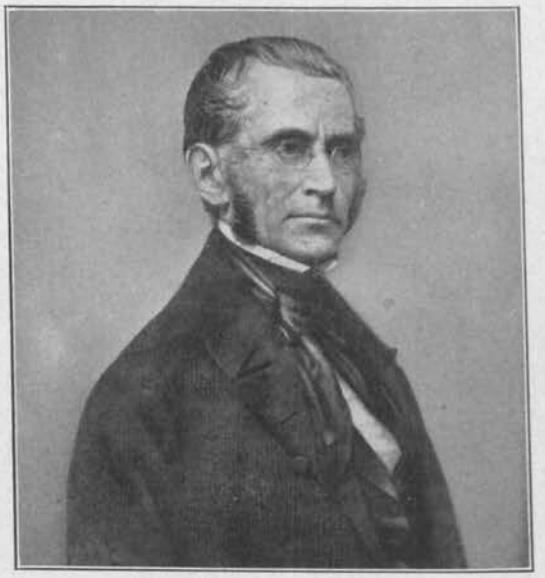
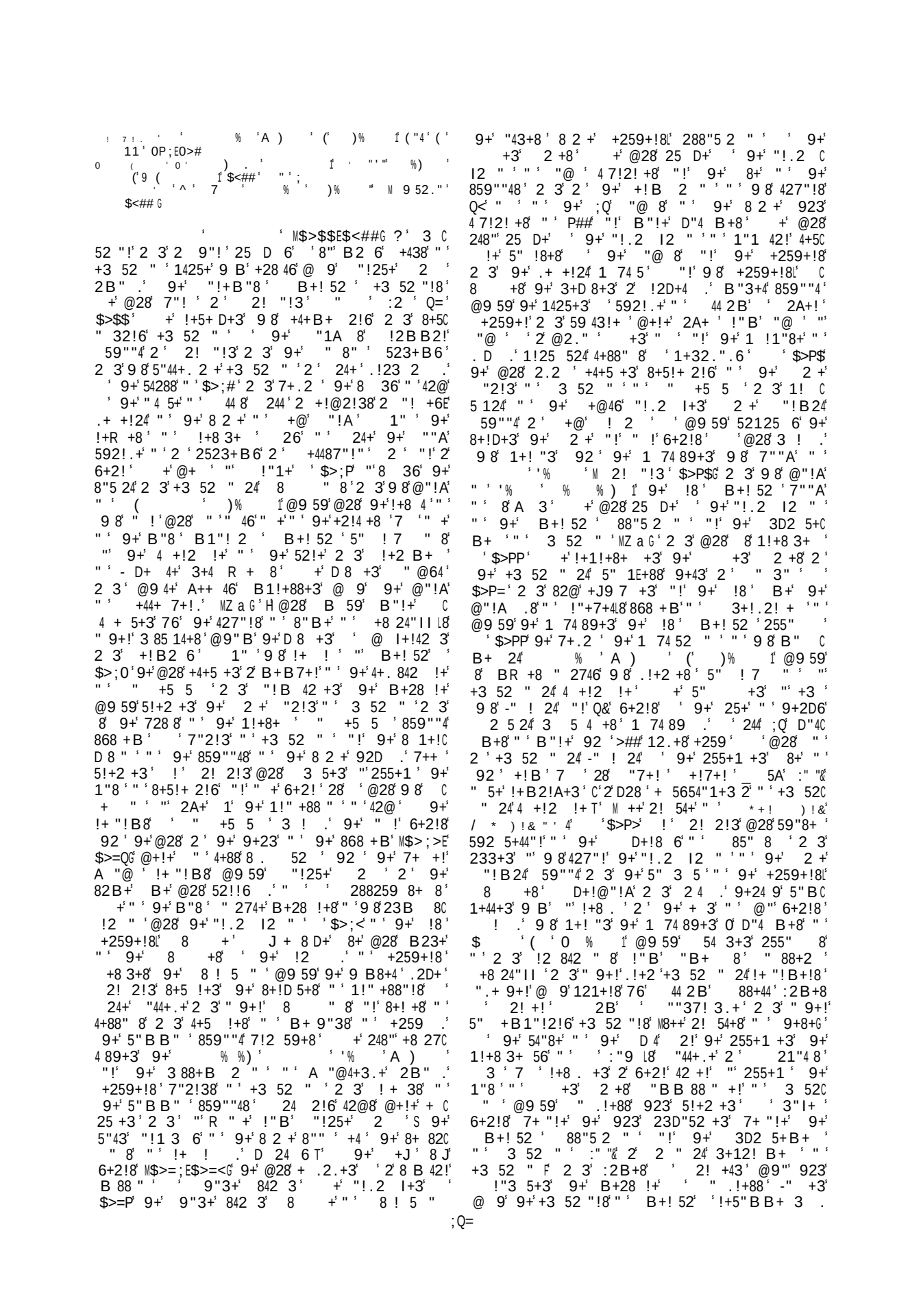


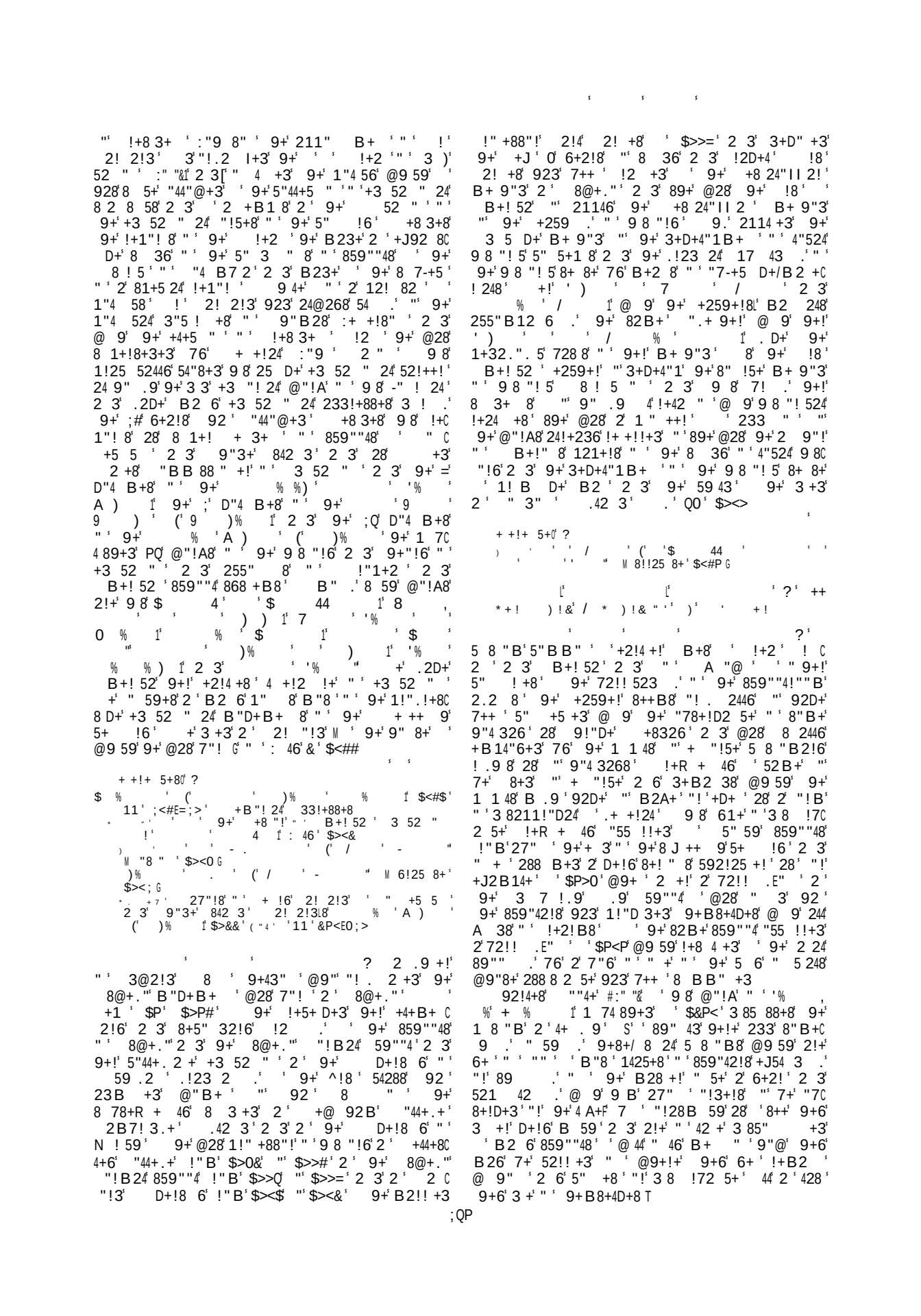
Charles Brooks.

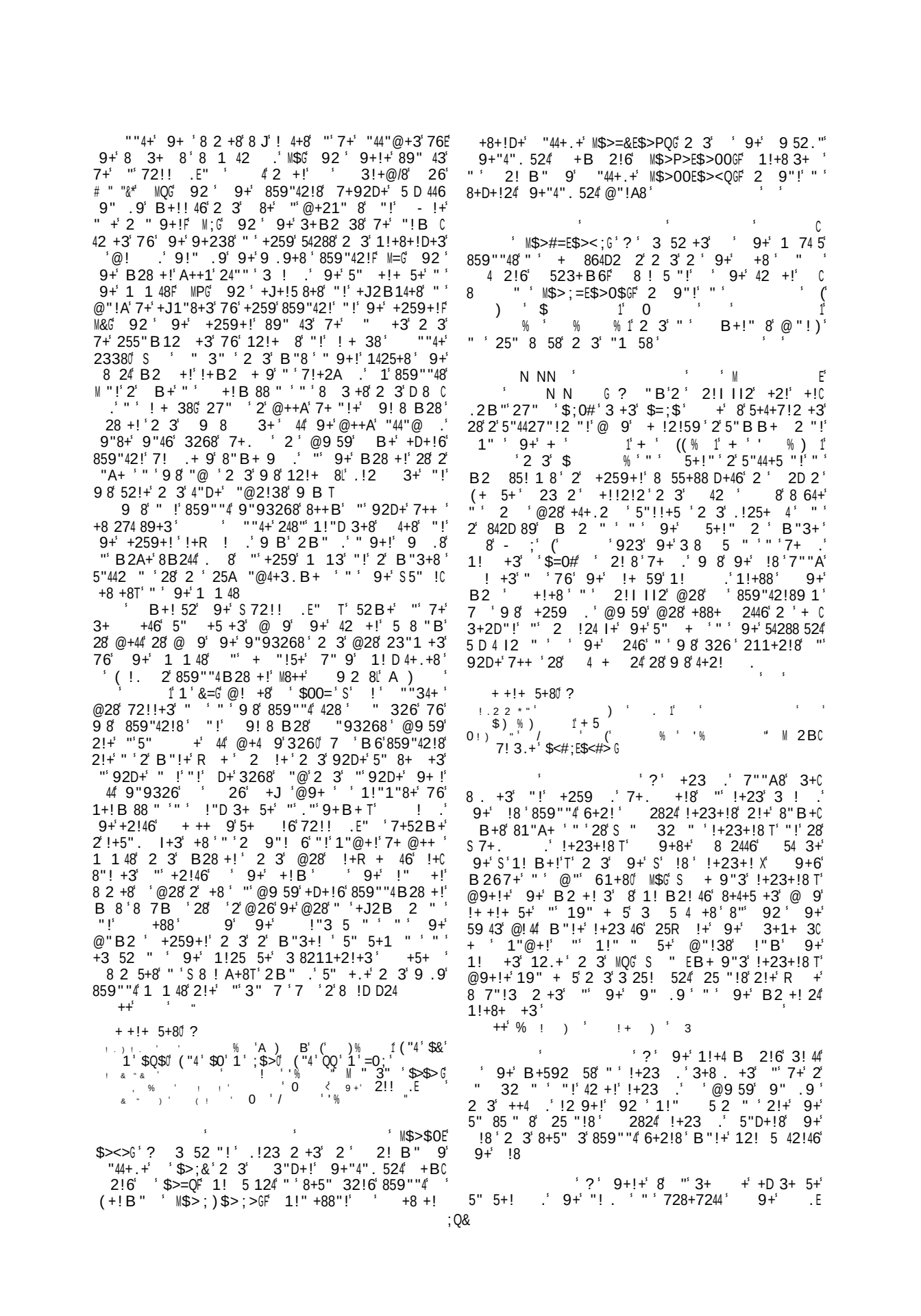
Henry Barnard.

Frederick A. P. Barnard.

A Group of American Educators.







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9 8 B"3 52 " " 728+7244 928 B23+ 2
B"8 D24 274+ 2 3 285 2 ." .2B+ "!. !48
8 1426+3 76 . !48 9+ .6B 28 B 2 3 " "
3""!8 B2 6 859""48 2 3 5"44+.+8 2 3 8 .!"@E
B." 1"1 42! 6 +D+!6 6+2!
+ +!+ 5+8 ?
- . 1 1 74 89+3 2 2446 M B+! 52 1"! 8
7 " +@ "!A G
! (+7) . 28+7244 9+ "44+.+8) 1
. 8 $>>>
* . + - . " M 2 !2 5 85" $<#Q G
+7 & /) 2 3)) & & . !) 7 O ,
- .) " M +@ "!A $><# G
+ - && + $ - . " M +@ "!A
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, ! . /) (- "
M 94+ 5 7 " 9 423+419 2 $>>< G
: M$0Q=E
$0<#G ? !"B + +3 52 " 24 !+ "!B+! +
@28 7"! 2B7 !. 9+ 8" " 2 @ .B2A+!
" 9 12!+ 8 @+!+ " 2 .4""B6 +B1+!2B+ F
9+ B" 9+!3 +3 2 " 82 6 9+2.+
" $>3 9+ !2 2@26 !"B 9"B+ 2 3 " 3 !+ .+
9+ 9" 8+ " 2 1968 5 2 +!27" 2
6+2! 9+ !+ ! +3 " 2B7 !. 2 3 5" +3
9 8 +3 52 " 2 9+ .6B 28 B M$0=;E$0=&G
+ 9+ 81+ @" 6+2!8 2 9+ D+!8 6 "
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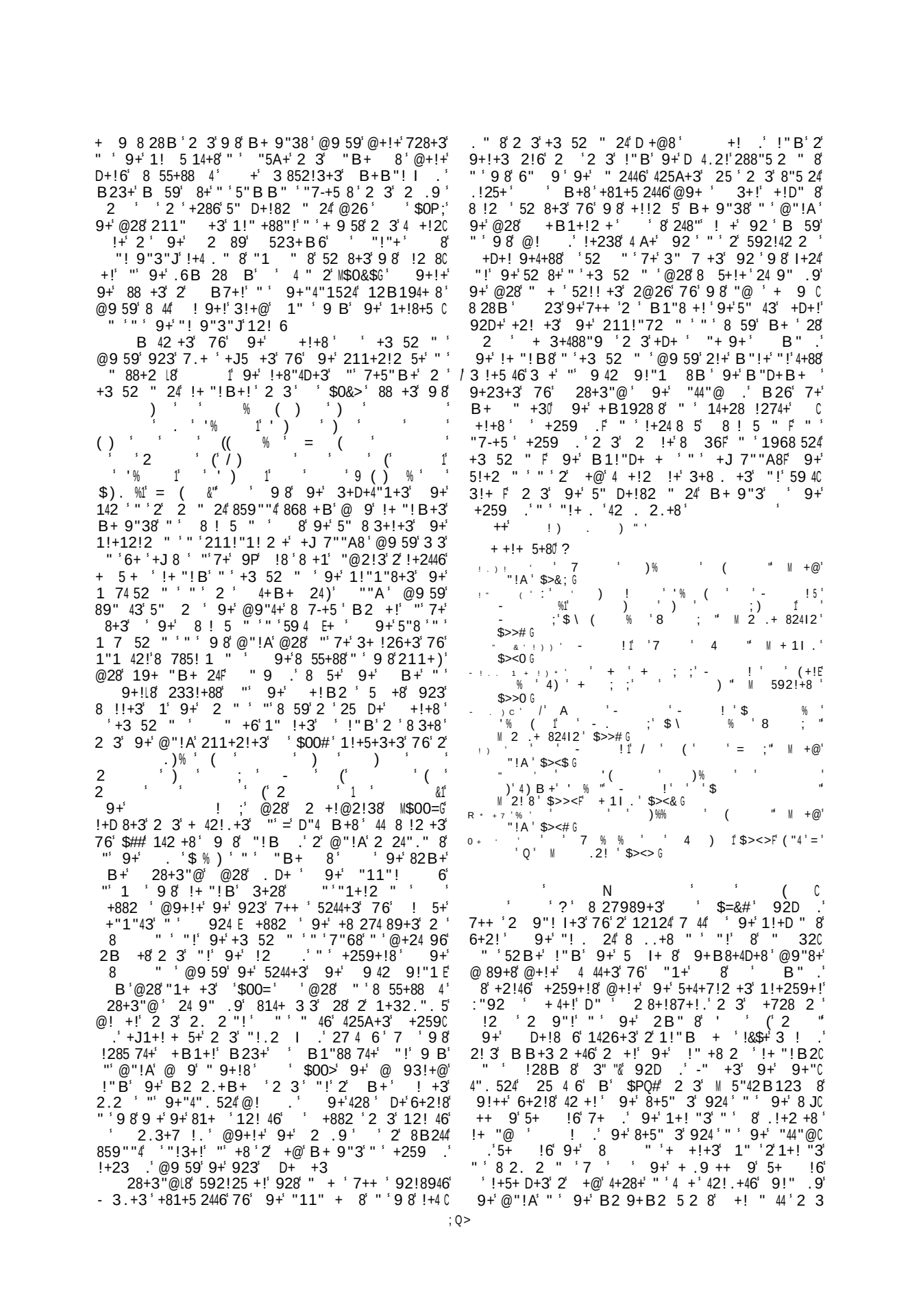
"! +"+ +!+3 1" 9 8 @"!A @ 9 .!+2



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' ' ' ?' ++

. + + * . ' 0 + &

' ?' "B+ B+8' 3+85! 7+3' 28' 2 ' 8 5 ' 54"8+46' !+42 +3' ' 592!25 +!' "' +2!' ' 211+2!8' +81+5 2446' ' 59 43!+ ' 8"B+ B+8' 1288 .' 9!" .9' 8+D+!24' 1+! "38' " ' D2!6 .' + 8 6' ' 5" 8 8 8' ' 2 ' 9 7 " ' " ' D"4C 2!6' 25 D 6' 2' 9+ .9 + .' " ' 9+' .+ +!24' B 8542!' + 8 " ' 2 3' 2' 3 81"8 " ' "' !+ !+2 ' !"B' 8"5 24' " 5+' ' 8' "11"8+3' ' 592!25 +!' "' @92 ' 8' 8"B+ B+8' 5244+3' 9+' 8"5 24' 8 5 ++')") + ' 2 3' ') !&' < 7 "")

' ' ' ' ' E' ' ?' 9+' " 3+!' " ' B" 28 5 8B' @9" ' @ 9' !+.!"!6' " ' 6882' #:" "&! 9 8' 7!" 9+!' 2 3' !+."!6' " ' 2I 2 I 8' #:" "&! 9 8' B2 +' ! + 3' 2 3' 859""4 +44"@' B2A+' 1' 9+' .!" 1' " ' 9+"C 4". 2 8' A "@ ' 2B" .' 9+' 2 9+!8' 28' 9+!S' 9!++' .!+2 ' 21123"5 2 8 T' 28 4' @28' 1!"72746' 7"! ' ' 9+' 6+2!' ;Q< 2 ' 8+82!+2' ' 21123"5 2 ' @9+!+' 9 8' 2 9+!' ' 28 4' 9+' +43+!' @28' 2' 8 55+88C 4' +259+!' " ' !9+ "! 5 ' 9+' +2!46' +3 52 " ' " ' 28 4' @28' ! 8 +3' "' 9 8' .!2 3B" 9+!' 9+' 82 46' 25! 2 ' " +' " ' 9+' @"B+ ' " ' 9+' 9 !59' "' 7+' .!" 1+3' @ 9' " 52 ' 2 3' ' 9 8' 25! 2' "44"@+3' 9+' +3 52 " 24' 1!+5+1 8' " ' !+."!6' 92 B2 !. 8' #:" "&" 8' 2' 6" .' B2 ' 28 4' 8 3 +3' !8 '@ 9' 9 8' 2 9+!' 2 3' 2 +!@2!38' 2 ' 9+ 8' @9+!+' 9 8' 5"B12 " 8' @+!+' !+."!6' " ' 2I 2 I 8' 2 3' "!' 2' B+' 9+' !+' +B1+!"!' : 4 2 '@ 9'@9"B' 9+'@28' "!'8"B+'6+2!8'" ' +!B8' " ' ! + 389 1' +!' 81+ 3 .' 8+D+!24' 6+2!8H2 ' 9+ 8' 28 4'!+ ! +3' "' 2+82!+2 '@9+!+'9+'1!25C 5+3' 9+' 1!" +88 " ' " ' 2 ' 8 ! 5 "!' ' !9+ "! 5' @ 9' 8 55+88 '2 3' 248"' 3+! ""A' 9+' +3 52 " ' " ' 7"68 ' ' 244' 9 8' 9 8' +J1+! + 5+' @28' 8 ! AE' .46' 4 A+' 92 ' " ' ' . 8 +' 9!" .9" ' 9 8' !6 .' 1+! "3' ' 9 8' 4 +' 9+'!+B2 +3' 2' 1 !+' 2 3' 1! .9 ' B2 ' 9+ ' 9+!+ "!+' 9+' 3+!C @+ '9 8' S'5" D+!8 " T' @9+!+76 '+ 5" !2.+3' 76' 9 8' B" 9+!' 2 3' 8 8 +!' 9+'.2D+' 1' 9+' 4 +' " ' 2' !9+ "! 5 2 ' @ 9' 8' +B1 2 " 8' " ' 1! 3+' 2 3' D2 6' "' +B 7!25+' 9+' B" 28 5' 4 +' 9+' +D+!' 23"1 +3' 9+' 1+88 B 8 5' 1"8 " ' " ' . 8 +' 8' 6+ ' 9"@+D+!' 9+' B" 28 5' 4 +' @28' 92!346 "!.2 I+3' ' 9+' 9 !59' 9" .9' 285+ 8B' @28' '9 .9' +8 ++B' 28' 2' B+2 8' " ' 2 2 .' 9! 8 2 ' 1+! +5 " ' 9+' 8"4 2!6' B" A8' " ' .61 ' 923' 3++3' .!23 2446' .2 9+!+3' ' 5"B B +8 ' 7 ' 9+' 9+!B ' 4 +' @28' 9+' " 46' "!B' " ' 285+ 5 8B' 9+ ' A "@ ' ' 8 2' "!' 28 4' 82@' 9+' 3+C +5 ' " ' 2' 868 +B' @9 59' 2 B+3' 2 ' 9! 8 2 ' 1+!C +5 " ' 2 3' 6+ ' 76' 8"42 " ' !+ 3+!+3' B1"88 74+' 9+' 9 .9+8 ' D ! +8 ' @9 59' @+!+' 8"5 24' ' 9+ !' 2 !+' 9+' 5"B B 6' 4 +' @28' 9+!+ "!+' 9 8' 3+24' ' 9+' 3+D+4"1+3' "!B' " ' 9 8' ! 4+ ' @9 59' !+B2 8' 28' 9+' .+ +!24' ! 4+' 9!" .9" ' 9+' 28 ' 9+' B" 28 +! +8' @+!+' "!.2 I+3' 28' 8+4 E' 8 11"! .'8"5 + +8 ' B2 6' !+81+5 8' 8 B 42!' "' 9+' + +3 5 +' B" 28 +! +8' " ' 2' 42 +!' 1+! "3' ' 9+' +8 ' 28 4' 3 3' " ' !+B2 ' 2' B" A' B2 6' 6+2!8 ' "!' 9+'@28' "!32 +3' 1!+876 +!' ' ;&=' 2 3' 8+!D+3' 28' 9+' 5"23- "!' "' 8+7 8' 89"1' " ' 2+82!+2 ' +' 8 55++3+3' "' 92 ' 8++' ' ;0#' 2 3' !+B2 +3' 9+!+' "!' 9+' !+8 ' " ' 9 8' 4 +' 2 3' ' 9 8' 1"8 " ' 7+52B+' 9+' 4+23 .' 592BC 1 " ' " ' 9+' 5+ +' 12! 6' +' 3 +3' ' ;0< 2 ' 9+' +2!46' 2.+' " ' P#' @"! ' " ' 76' 9 8' 427"!8' 2 3' 9 8' 2 8 +! +8 '@9 59' 923' +2!46' 3+! B +3' 9 8' 9+24 9

28 4L8' 1425+' ' 9+' 8 "!6' " ' 1+32." .6' 8' 288 !+3' " ' " 46' 76' 9 8' D+!6' +J + 8 D+' 8 C " 24'@"!A '7 '8 44' B"!+' 76' @"'@"!A8 '9 8' ! 4+8' "!' B" A8' 2 3' 9 8' 9"B 46' " ' 9+' 8+' " ' 12.2 ' 4 +!2 !+' # ' ' % 1' "! '%% G ' 9+' !8 '@+!+' " 274+' " ' B+!+46' "!' @ 8+' C 8 .9 ' "' 9+' 5" 3 " 8' " ' B"!24' !2 . H "!' 9+' B" 28 5' 868 +B' ' 9+' 9 !59' 928' 24@268' 7++ ' 2' 868 +B' " ' 9 .9+!' B"!24' !2 ' "' @9 59' 9"8+' @9"' 2 B+3' 2 ' 9! 8 2 ' 1+! +5 " ' 8 7B +3' 9+B8+4D+8' 7 ' 248"' 9+' 1425+' ' 92 ' 868 +B' " ' 9+' +3 52 " ' " ' 9+' 6" .' 59 43!+ ' . D+ ' 76' 12!+ 8' "' 9+' B" 28 +! +8' "!' !+5+ D+3' 28' "!192 8' 9+' B" 28 +!6' 859""4' 2!"8+' 28' 2' 1!"D 8 " ' "!' 9+8+' 59 43!+ ' ' 9+' 28 ' 2 3' 7+52B+ ' 28' ' 9+' +8 ' 2' 12! ' " ' 9+' B" 28 5' +8 274 89B+ ' 9+' 1" ' " ' B"8 ' +!+8 ' ' 9+8+' ! 4+8' 5" 5+! .' +3 52 " ' " ' 59 43!+ ' ' 9+' B" 28 +! +8' 8' 9+' 5" 5+1 " ' " ' 9+' B+ 9"3' 2 3' 1 !1"8+' " ' 1 89B+ ' 9+!+' 89" 43' 7+' 8"B+' !2 " 24' 5" +5 " ' 7+ @++ ' 2 ' " + 8+' 2 3' 8' 1 89B+ ' @9 59' 89" 43' 7+' B"!+' 92 ' 8 +! .' 4 5 +3' "!' @!" .E3" .' ' 89" 43' 7+' 2 '+J+!5 8+' ' 9+' "11"8 +' D ! +' 9+' 59 43' 92 ' - !+3' 2 " 9+!' 89" 43' 8++A' 9+' "!. D+ +8' " ' 9+' 59 43' @!" .+3' 2 3' 8++A' "' 1+! "!B' 25 8' " ' A 3 +8' "!' 9 B' 9+' .!++36' 59 43' 89" 43' 7+' 1 89+3' 76' 7+ .' 3+1! D+3' " ' 2' 1"! " ' " ' 9 8' ""3' 9+' +D 4' 81+2A+!' 89" 43' 7+' 8+ + 5+3' "' 2' 1+! "3' " ' 8 4+ 5+' ' 9 8' 2 3+' "@2!3' 9+2 9+ ' 4 +!2 !+' 28 4' ""A' 9+' 1"8 " ' 92 ' 9+!+' @28' 7+ + ' "' 7+' .2 +3' !"B' 9+' 8 36' " ' 244' A 38' " ' @! .8' 9+!+' @28' B 59' ' 9+' 9+2 9+ ' @! +!8' " + 8 D+' "' 7+4 +D+!8' ' 9! 8 2 6' 2 3' B 59' 92 ' @28' 723' B "!2446' ' @+' B 8' " ' 2A+' 9 .8' C 3 85! B 2 +46' 7 ' !2 9+!' " 46' @92 ' 8' 1!" C 274+' ' @" 43' 7+' 892B+ 4' "!' 8' @9"' ' 9+' 528+' " ' ""3' !+-+5 ' 9+' - !" 8' "' 2A+' ' 9+' 528+' " ' 8 3 +8' "' 255" ' " ' @92 ' A++18' 9+

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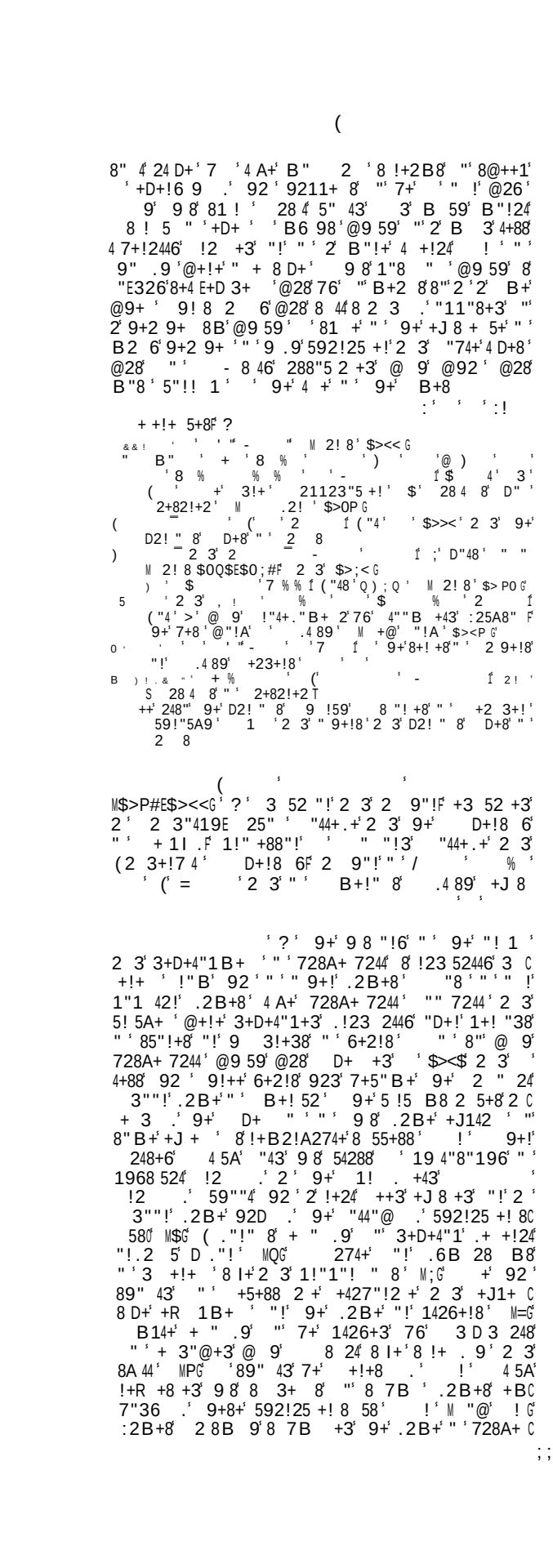

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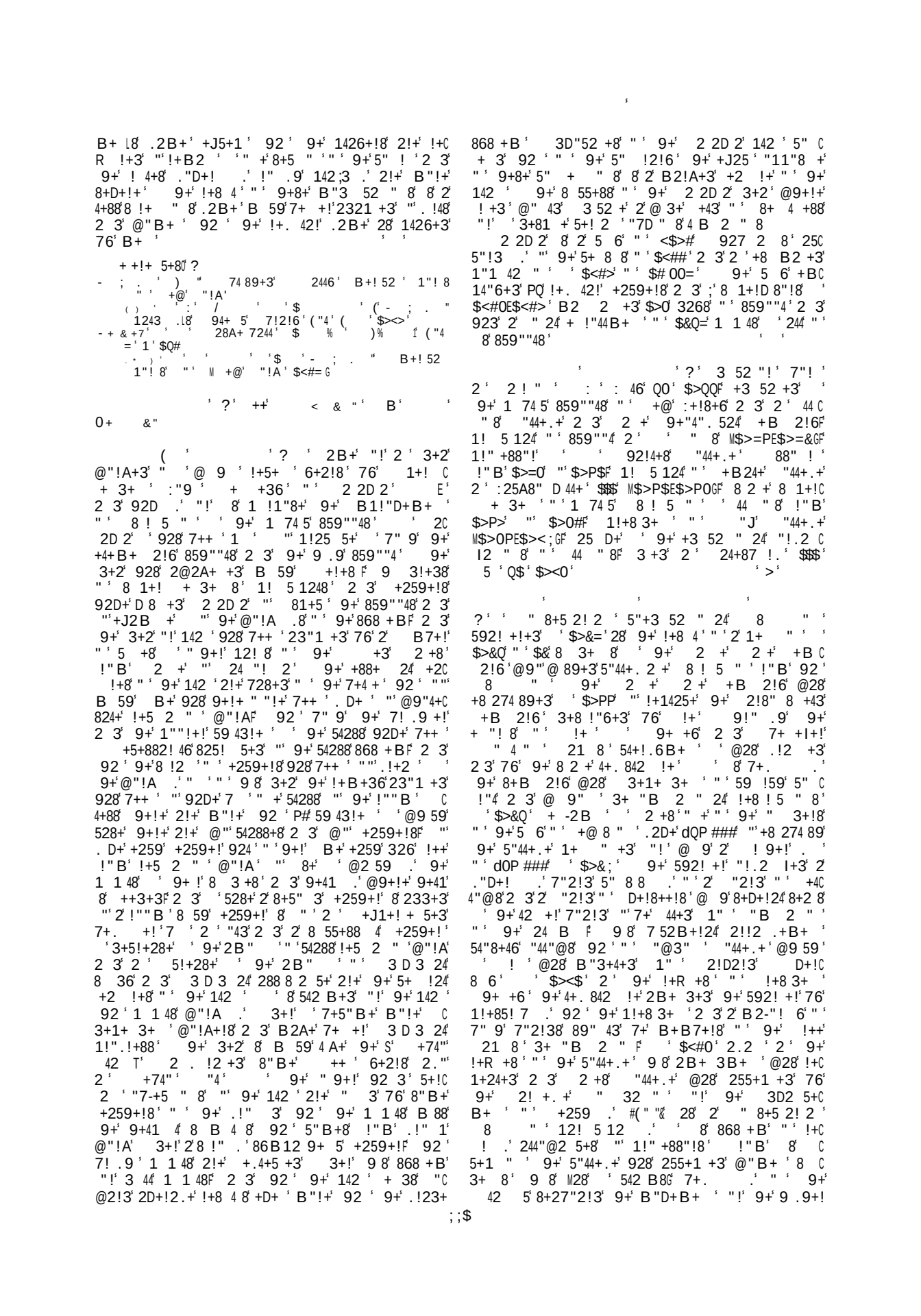


+3 52 " ' " ' @"B+ ' 2 +8' "44+.+' 928' A+1 ' 592!25 +! 8 58' 3 +' "' 8' 9 8 "!6' 2 3' 9+' 5 !C 5 B8 2 5+8' " ' 8' " 3 .F !2 +! +8' 2!+' 1!"9 7 +3F "' " +' S52 ' 7+' 2' B+B7+!' " ' 9+' 5"44+.+' @ 9" ' 2A .' 2 3' A++1 .' 2' 14+3.+' "' 278 2 ' !"B' 245"9"4 5' 3! A8F T' 9+' +5+882!6' +J1+ 8+8' 2!+' 4"@' MdQ#&' 2' 6+2!G' 2 3' B2 6' " ' 9+' 8 3+ 8' 2!+' 8+4 E8 11"! .' 9+' "43' +@' .42 3' 5 8 "B' 8' A+1 ' " ' + 5" !2.C .' ++36' 8 3+ 8' "' +259' 3 ! .' 12! ' " ' 9+' 6+2! ' 9+!+' 2!+' B2 6' 859"42!89 18 ' +.!++8' . D+ '2!+' '2 3' ' "' .!23 2 +8' " '2 '4+28 ' 9!++' 6+2!8!' 8 2 3 .' 9+' "77' D 6' 59""4 ' 2 +!' ;>' 6+2!8' " ' +J 8 + 5+ 28' 2' 3+12! C B+ ' @28' 3 85" +3' ' $<#>' 9+!+' 2!+' $$' 7 43 .8' D24 +3 ' @ 9' .!" 38' 2 3' +R 1B+ ' 2 ' d=QP ###' 9+' !+8" !5+8' 92D+' 3" 74+3' @ 9 ' 9+' 128 ' " !' 6+2!8 ' 42!.+46' 9!" .9' 9+' 7+ + 25 " 8' " ' ! ' 3!+@' 2! +.+' 2 3' " ' ! ' 2! 4+ ' "+' 42 +' " ' 2 ' !2 5 85" ' 9+' +' 5"B+' "!' 9+' 8524 6+2!' $<#>' @28' d=0 PQPF . 8' !"B' 1! D2 +' 8" !5+8' 2B" +3' "' d&& <>Q' 9+' 2D+!2.+' 8242!6' " ' 2' 1!" +88"!' 8' d$=>#' 9+!+' 2!+' M$<$#G =&$' 8 3+ 8' 2 3' QQ' B+B7+!8' " ' 9+' 8 ! 5 .' 8 2 ' " ' @9"B' $&' 2!+' 44' 1!" +88"!8 ' +"!.+' ' 928+' ' ' 8' 1!+8 3+ ' '

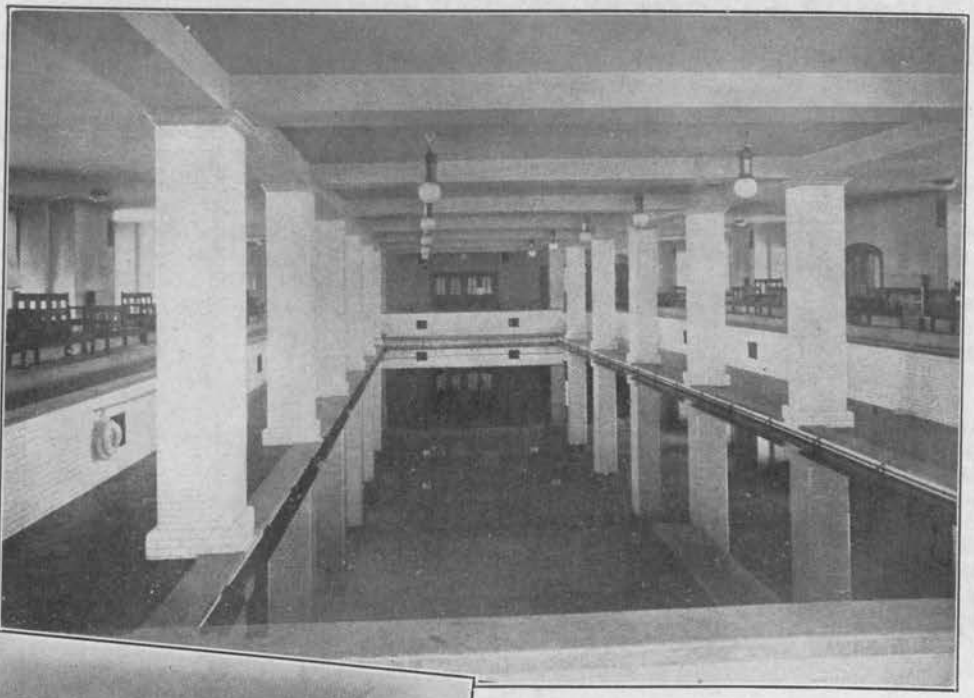
' : ' M$OO&E$>P=G' ?' !23 C 2 +3' 2' 2!D2!3' "44+.+' ' $>##F 8 ! 5 "!' ' 9 44 18' 523+B6' 2' 3"D+!' M$>##E$>#;G' 2 3' 1!+8 3+ ' " ' 334+7 !6' M(G' "44+.+' M$>$>E$>;<G

' : ' M$>$#E$>>>G' ?' 3 C 52 +3' 2' 9 18' 523+B6' 3"D+!' 2 3' 334+7 !6' M(G' "44+.+F 1! 5 124' " ' 9+' 859""48' 2' 92!4+8 "@ ' 288' M$>;;E$>==G' 2 3' " ' 9+' ! B B+!' 59""4 ' "8 " ' M$>==E' $>O&G

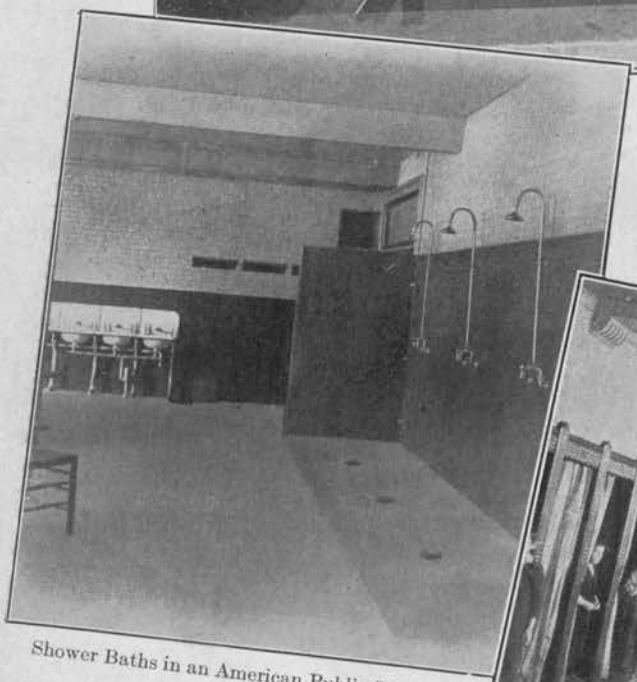
' ' ' M$>QOE' $<#QG' ?' 3 52 "!' 2 3' 2 9"!' +3 52 +3' ' 9+' 1 74 5' 859""48' " ' 288259 8+ 8' 2' 9+' "!5+8 +!' 523+B6' 2 3' 2' !"@ ' D+!8 6F 1! 5 124' " ' 523+B6' 2' +23D 44+' M$>P$E$>POGF 8 1+! + 3+ ' " ' 859""48' ' !2@ "!3' " 6' 2' M$>POE$>&#GF 3+1 6' 8 2 +' 8 1+! + 3C + ' " ' 1 74 5' 8 ! 5 " ' ' + 864D2 2' M$>&#E$>&&GF 2 9"!' " ' . ')% 1' ' (' 0 % ' 9) 1' / ' (' ' '$ 1' 2 3' " ' B+!" 8' 9 8C "! 524' @"!A8' ' '

' ?' "!' B"!+' 92 ' 2' R 2! +!' " ' 2' 5+ C !6' 72 98' 92D+' 7++ ' 2' !+. 42!' 12!' " ' 9+' +R 1C B+ ' " ' B"3+B' 859""4' 7 43 .8' ' !"1+' 2 3' 9+6' 92D+' 4" .' 8 5+' 1288+3' 9+' +J1+!' C B+ 24' 8 2.+' ' 8"B+' B+! 52 ' 5 +8' ' 9+ !'.+ +!)' !"3 5 " ' "' 859""48' 928' 7++ ' 3+426+3' 4" .+!' 92 ' 5" 43' 92D+' 7++ ' 2 5 C 12 +3' 9 8' 2!36' !+5". " ' 8' 3 +' 12! 46' "' 9+' 25 ' 92 ' 9"B+' 25 4 +8' "!' 72 98' 2!+' 7+ +!' 2 3' B"!+' .+ +!2446' " 3' 9+!+' 92 ' ' !"1+' 2 3' 12! 6' "' 9+' 25 ' 92 ' " ! .+ +!24' ."D+! B+ 24' 2 3+' 8' 4+88' 12 +! 24' ' ' 9+' 5!"@3+3' 5+ +!8' " ' 42!.+' 5 +8' 5" C 3 " 8' 92D+' !21 346' 7+5"B+' 8"' 723' 92 ' 859""4' 2 3' .+ +!24' B 5 124' 72 98' 92D+' 7+5"B+' +C 5+88 +8' "!' 9+' 82A+' " ' 9+' 1 74 5'@+4 2!+' C 8 3+' 9+' 42!.+' 5 +8' 5"B12!2 D+46' 4 4+' 1!"5+88' 928' 7++ ' B23+' ' 8 1146 .' 72 9 .' 25 4 +8' ' .!2B B2!' 859""48 ' 9+' 42!.+!' 2 3' 7+ +!' 7 43 .8' "!' 9 .9' 859""48' 2!+' "@' 7+ .' .+ C +!2446' +R 11+3' @ 9' 72 98' 9+' 3+B2 3' 9"@+D+!' 928' 5"B+' ' 5" +5 " '@ 9' 9+' 3+C D+4"1B+ ' " ' 2 94+ 58' 2 3' 1968 524' !2 .' ' .6B 28 58' "" 7244' !25A' @"!A' + 8' 2 3' 8 59' D ."!" 8' 81"! 8' ".+ 9+!' @ 9' B"!+' 868 +B2 5'.6B 28 5'@"!A' 92D+' B23+' 72 9 .' 25 4 +8' +5+882!6' ' 7 43 .8' "!' 9+' 42!.+!' 9 .9' 859""48' 2 3' ' 8++B8' 1!"7274+' 92 ' 8 B 42!' 3+B2 38' @ 44' +D+ 2446' 92D+' "' 7+' B+ ' ' 244' 42!.+!' 2 3' 7+ +!' .!2B B2!' 859""48' +' 92 ' 28' ' B26' 9+!+' 8' "@' 5"B12!2 D+46' 4 4+' 3+B2 3' '8B244+!' 5 +8' '5" +5 " '@ 9' 1 7C 4 5' 859""4' 7 43 .8' "' 8 1146' 72 9 .' 25 4 +8' "!' 244' " ' 9+' 1 1 48' '2 + 32 5+' 2 3' 9+' +5+8C 8 6' " ' 1 74 546' 8 1+!D 8 .' 9+' 72 9 .' " ' 244' 859""4 59 43!+ ' 928' " ' 6+ ' 7++ ' !+259+3' ' B2A .' 9 8' 8 2 +B+ ' 9+!+' 8' "' 3+8 !+' "' B B I+' 9+' ++3' " ' 859""4' 72 98' 74 5' 9+24 9' 2 3' 1 74 5' B"!248' ' B 26' 82 +46' 7+' 82 3' @" 43' ' B2 6' 12! 8' " ' 9+'5" !6' 1!" ' B 59' 76' 9+' !"3 5 " ' 2 3' 3 85!++' 8+' " ' 859""4' 72 98' +81+5 2446' ' D 442.+' 2 3' 5" !6' 859""48' 9+' .!+2 +8' ++3' "!' 859""4' 72 98' 8' 2 ' 1!+8+ ' 9+' 5" .+8 +3' 3 8 ! 5 8' " ' 42!.+' 5 +8' 2 3' ' 9+' D 442.+8' 2 3' 5" !6' 3 8 ! 5 8' @9+!+' 72 9 78' ' 9"B+8' 2!+' 5"B12!2 D+46' !2!+ 8!+.2!3 .' R +8 " 8' " ' 5"B12!2 D+' ++3' 2 3' B2 +!8' " ' 4"524' 1"4 56' 2 3' 4"524' 1! 3+' ' 2' 859""4' 8' "' 7+' +R 11+3' @ 9' 72 98' @92 ' 2!+' 9+' !+R !+B+ 8Z' 2 !2446' 9+' !8 ' !+R 8 +' 8' 2' 82 8 25 "!6' @2 +!' 8 1146' 9 8' 928' 7++ ' 9+' 59 +' 3!2@725A' ' D 442.+' 2 3' 5" !6' 859""48' 7" 9' "!' 9+' 9 .9' 859""4' 2 3' +4+B+ 2!6' .!23+8' ' 5 +8' @ 9' 1 74 5' @2 +!@"!A8' 2 3' 8+@+!' 868 +B8' ' 8' 2' B2 +!' " ' 8B244' +J1+ 8+' "' +R 1' 2' 859""4' @ 9' 72 98' ' ' 8' "@' 1"88 74+' "' 92D+' !+. 42!' 2 3' 23+R 2 +' @2 +!' 8 1146' ' D 442.+' 2 3' 5" !6' 859""48' 76' 9+' !"3 5 " ' " ' 9+' 2 !' 1!+88 !+' 2 A' 868 +B' @ 3B 448' 2 3' @2 +!' 2 A8' 27"D+' .!" 3' 2!+' B1!25 5274+' ' 5"43' 54 B2 +8' 2 3' 2!+' !+4 274+' 2 6@9+!+' M ++' ! 9+!' 3 85 8C 8 " ' " ' 9 8' B+ 9"3' 3+!' ! ") "' 2 3' #)!&" 4

2 9 78' 92D+' "' 1425+' ' 1 74 5' 859""4' 7 43 .8' 8 B146' 7+52 8+' 9+6' 2!+' "" +J1+ C 8 D+' "' 8 244' 2 3' "1+!2 +' " +!' "" B 59' "1C 1"! 6' "!' 5" 2." ' !+R !+' "" B 59' 2 C + " ' "' A++1' 54+2 ' 2 3' 2A+' 1' "" B 59' !"" B ' +8 3+8' 2' !2 ' "!' 89"@+!' 72 9' 8' B"!+' D ."!2 .' 2 3' B"!+' 54+2 8 .' 92 ' 2' 7' 72 9' 2 3' !+R !+8' 4+88' B+' @ B B .' 2 A8' !"3 5+' 2 ' +4+B+ ' " ' @9"4+8"B+' +J+!C 5 8+' 2 3' 81"! ' " ' 5" +5 +3' @ 9' " 9+!' "!B8' " ' 72 98' 2 3' 2!+' @"! 96' 2 !25 " 8' "!' 7"68F 7 ' 9+6' 2!+' " ' 1!25 5274+' ' B"8 ' 859""48

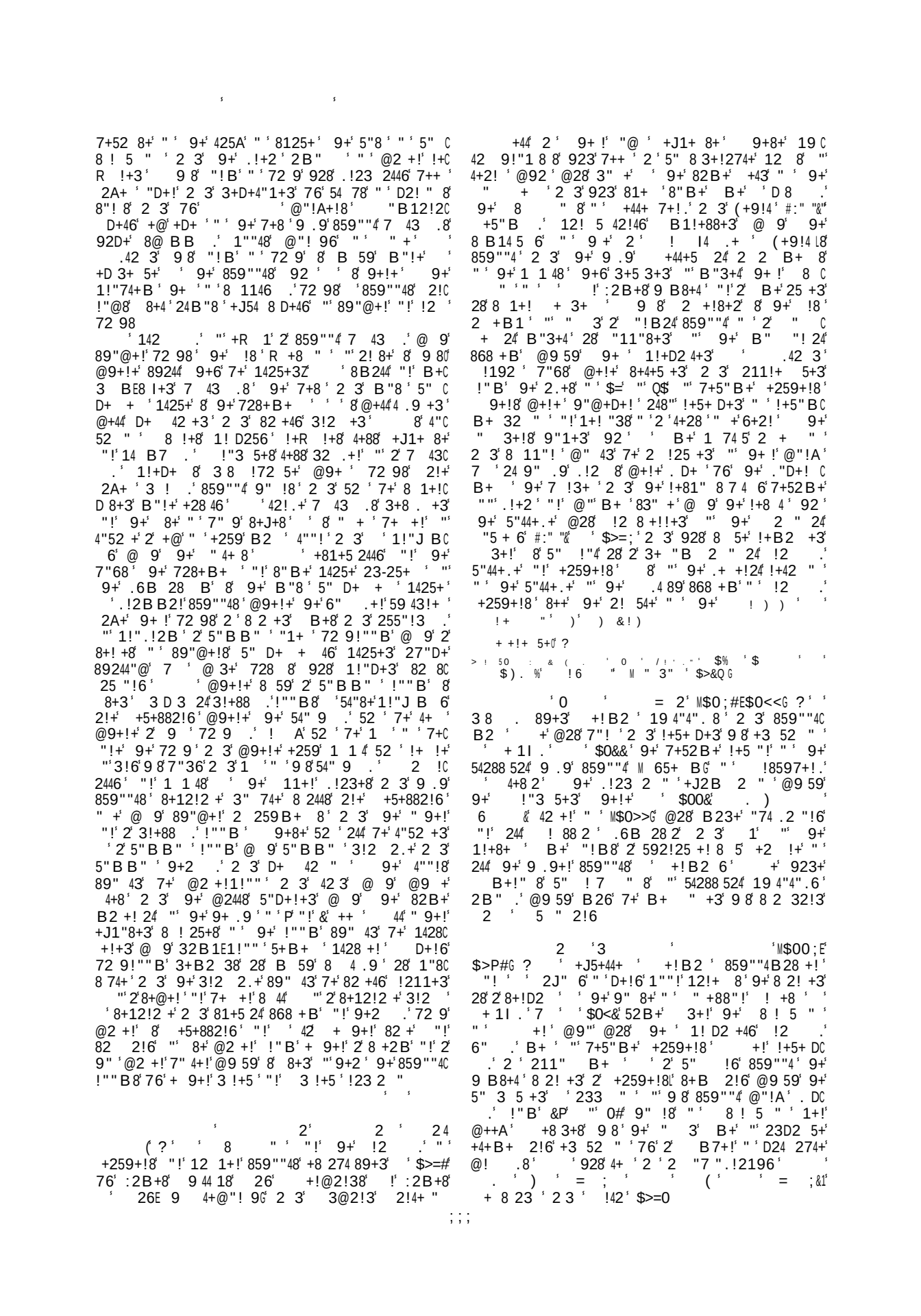


Swimming Pool of the College of the City of New York.



Shower Baths in an American Public School.

Bath Room in Public School, Dresden, Germany.



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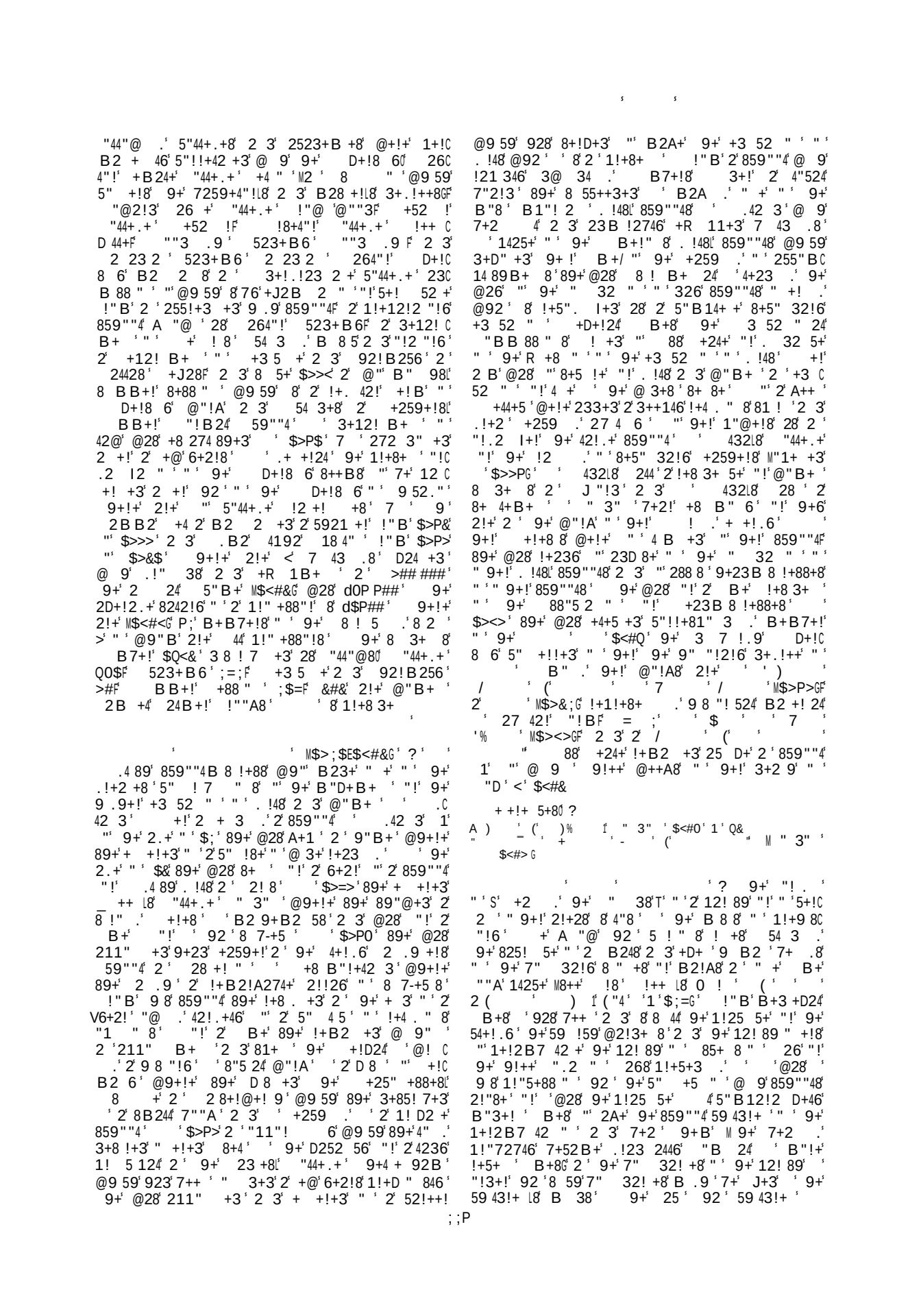

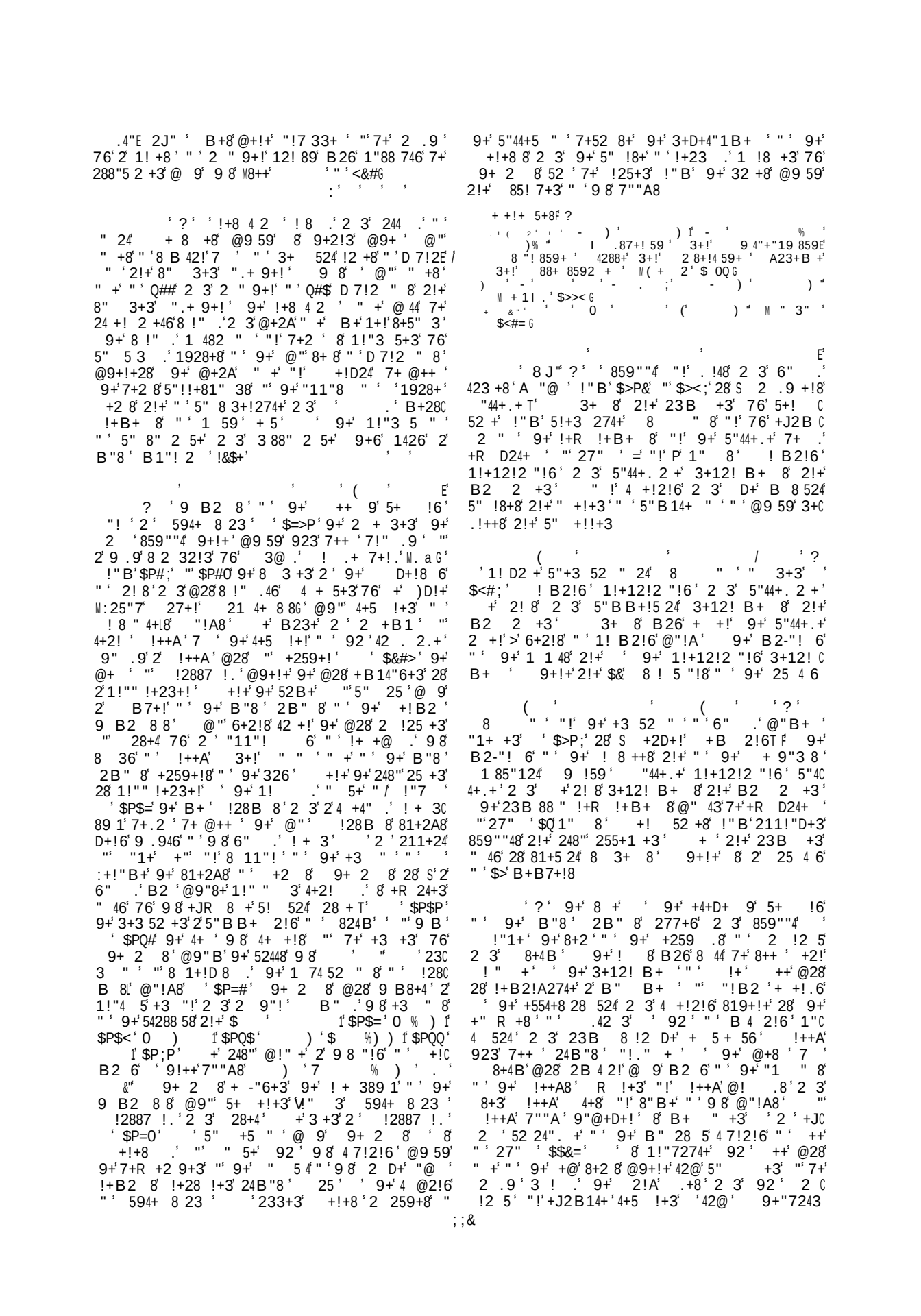

@9"' 7+52B+' !597 89"1' "' 2 +!7 !6' 8' A "@' "' 92D+' 1 !8 +3' 9 8' 8 3 +8' 2' ++' 2 3'@28' 8 ! B+ 24' '1!"B" .' 9+'8 36'"' 9+' "B2 '42@'2B" .' 9 8' 1+!8" 24' !+ +' "' 54+! 58' ++' @28' !2 9+!' 4 7+!2446' 3 81"8+3' "C @2!3' 9+' 54288 524' 8 3 +8' 2 3' + +' "' " + ' @9"' 2 .9' 2' 9+' 277+6' "@2!3' 9+' 54"8+' "' 9+' @+4 9' 5+ !6' 3+ + 3+3' 9 8' 1"C 8 " '762 '211+24' "' 9+)J2B14+' "' 9+' 2 9+!8' 9+' 278 !25' B23+' 76' + +' "' 4 2 L8 9) ' (' "!' 9 8' 1 1 48' 2 ¯ ++' 8' 8 44' 1!+8+!D+3' ' 9+' 2! 8' 7!2!6' 28' 9+' 6' $ "'

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+59+!' 8' " +' "' 9+' B"8' !+B2!A274+' B+ +' "' 9+' 8+D+ ++ 9' 5+ !6' 4@268' 44' "' 3+28' 859+B+8' 2 3' 1!"-+5 8' 9+' 5"B7 +3' 2' + 56C 54"1+3 5' A "@4+3.+' @ 9' B2 6E8 3+3' 1!25 524' +!+8 8' ' 9+' 9 8 "!6'" '59+B 8 !6' 9+' 8 2 38' 28' 9+' "! . 2 "!' "' 9+' !8' 5" 8 8 + -' 24 9" .9' 5"!!+5' 9+"!6' "' 59+B 524' 25 " ' 9+' 1!"5+88+8' "' 7 ! .' 2 3' "' 9+' 5245 2 " ' "' B+ 248' @+!+' +J142 +3' 76' 9 B' "' 9+' 8 11"C 8 " ' 92' 9+8+' 8 78 2 5+8' 5" 2 +3' 2' 5"BC 7 8 74+' +4+B+ ' "' '@9 59' 9+6' 7+52B+' 3+1! D+3' " ' . " ' 9+8+' 3"5 ! +8' ! 9+!' 3+D+4C "1+3' 76' 294' M$&&#E$0;=G' 5" 8 +3' 9+' 2B" 8' 194". 8 5' 9+"!6' @9 59' 3"B 2 +3' 59+B 8 !6' 4' "@2!3' 9+' 54"8+' "' 9+' + .9C ++ 9' 5+ !6

8' 2 ' +5" "B 8' +59+!' @28' B7 +3' @ 9' 9+' 3+28' "' 9 8' 2.+' @9 59' @+!+' !+1!+8+ +3' 76' 9+' 1"4 5 +8' "' "47+! ' 9+' .!+2' B 8 +!' "' 2 5+' "' 8' % (' +' @28' 2' 9"!" .9' 7+4 +D+!' ' 9+' 278"4 +' 1"@+!' "' 9+' 2 +' 9+' + 5" !2.+B+ ' "' 9"B+' 3 8 !6' 2 3' 9+' B1!"D+B+ ' "' 5"B B+!5+

9+' 1!"3 5 .' 54288+8' 2!B+!8' 2! 82 8' B+!592 8' 9+' !+.2!3+3' 28' 9+' 725A7" +' "' 9+' 2 +' A+' 25" ' 9+' 5" 8 3+!+3' 9+' "7-+5' "' 85 + 5+' "' 7+' 9+' B1!"D+B+ ' "' 9+'8 2 + ('$?'I

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?' ' +!B2' 19 4"4". 8' 9+' 59 + ' !+1!+8+ 2C D+' "' 9+' 19 4"8"19 524' 859""4' "' 42 . 2.+' +259 .' +' @28' 7"! ' ' 8+!' 9 +' 1!"DC 5+' 8 3 +3' "!' Q 6+2!8' 2' 9+' 1! +8 8L 8+B C 2!6' ' 43+89+ B' 7+52B+' 2' +259+!' 2' 9+' 2.+' "' $<' 7 '42 +!' "M$O0<<G "'A' 1' 9+' 8 36' "' B+3 5 +' ' " .+ ' 2 3' 7+.2' "' 1!25 5+' ' $>#; ' $>$=' 9+' 7+52B+' 9+' 3 !+5 "!' "' 8+D+!24' B 4 2!6' 9"81 248' ' !2 A "! E" E 9+E 2 ' 2 3' ' $>$P' 9+' 8+ 4+3' 28' 2' 1968 5 2 ' ' + 7259' @9+!+' >' 6+2!8' 42 +!' 9+' "1+ +3' 2' 8B244' 1! D2 +' 859""4' @9 59' 9+' 3 !+5 +3' 4' 9 8' 3+2 9' 9+' 8 ! 5 " ' @9 59' 9+' .2D+' 4+3' 9 B' "' !+8 B+' 9+' 4 . 8 5' 8 3 +8' @9 59' 923' "55 1 +3' 9 B' 28' 2' +259+!' +2!46' ' 9 8' 4 +' +' !8' 1 74 89+3' 9 8' @"!A' " ' +) % ' = ') ' 7 ' = 32 &1' $>Q=' @9 59' @28' "44"@+3' 76' 9 8') ' ' % ' # (') &1' $>Q0') () % ') ' % ' 7 ;' # ' 7 ' 7 &1' $>;&E$>;<' 2 3' + ') % ' ' ' #7 ' ' &1' $>=>' 28' @+4' 28' 76' B+!" 8' +J 7""A8' 2 3' " 9+!' @! .8' 4 9" .9' 9+' @28' 2' 9+' 2.+' " ' P# @9+' 9+' !+8 B+3' 9 8' 4 . 8 5' !+E

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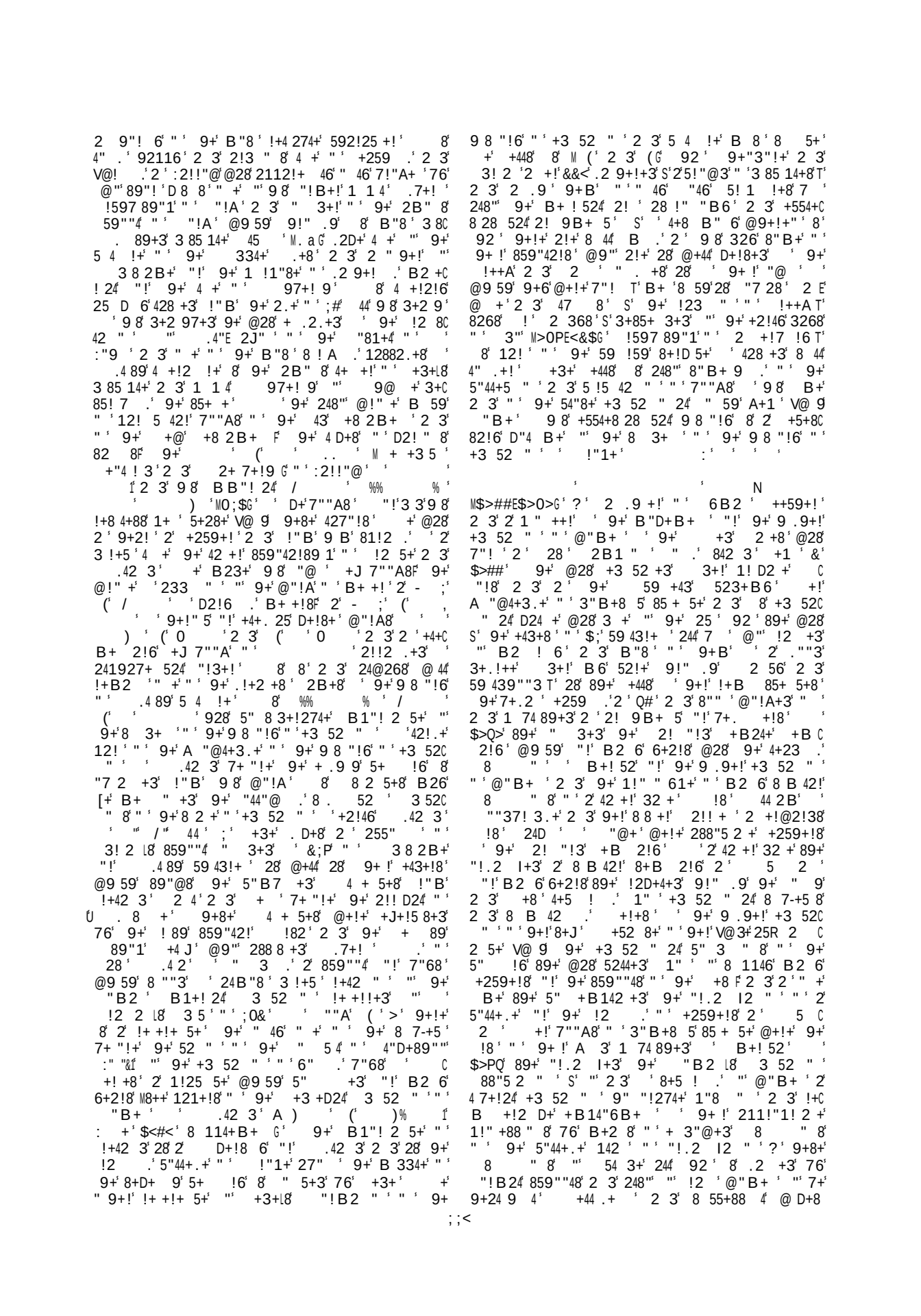

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mothers, and housekeepers." The chief problem in the education of women, as Miss Beecher saw it, was for the education of the needs of the family, hence the large emphasis which she placed on the study of domestic science. She was active in the Western Literary Institute and the American Association for the Advancement of Education (*q.v.*), and was probably the first woman who participated in the proceedings of national educational associations. She contributed largely to the best educational literature of her day. Among her books, besides textbooks on arithmetic and mental philosophy, are *Suggestions on Education* (1832), *The Moral Instructor* (1838), *Physiology and Calisthenics* (1856), *Religious Training of Children* (1864), and *Woman's Profession as Mother and Educator* (1871). She died at Elmira, N.Y., on May 12, 1878. W. S. M.

Reference: —

BEECHER, C. E. Reminiscences in Barnard's *American Journal of Education*, 1878, Vol. 28, pp. 65–96.

BEECHER, EDWARD (1803–1895). — Son of Lyman Beecher and brother of Catherine E.; educated at Yale College and the Andover Theological Seminary; for several years he was tutor at Yale, and for 14 years president of Illinois College (1830–1844); subsequently he was professor in the Chicago Theological Seminary. W. S. M.

BEECHER, LYMAN (1775–1863). — Educator, graduated from Yale College in 1797; he was active in the improvement of the rural schools of Connecticut; was one of the founders of the Connecticut Education Society, and for 20 years he was president of the Lane Theological Seminary (1832–1852). Four of his children — Catherine E., Edward, Harriet, and Thomas K., — were also identified with the educational work of their day. W. S. M.

BEECHER, THOMAS KINNICUT (1824–1900). — Schoolman, son of Lyman Beecher, was graduated from Illinois College in 1845; engaged in secondary school work in Connecticut and Pennsylvania for a number of years, and contributed numerous articles to the educational journals. W. S. M.

BEGGING STUDENTS. — During several of the latter centuries of the Middle Ages it was permissible and even customary for students of all grades to support themselves by begging, or at least upon the gifts of food or money given by the people freely or upon solicitation. The sanction of the Church given to mendicancy, as well as its constant approval of generosity as the chief Christian virtue, had much to do with the widespread adoption of this method of life by the student. The custom of begging was closely connected with the migratory customs of the students, again stimulated, if not sanctioned, by the examples set by the Church. Indeed, all classes in society were influenced by these same customs. The merchant led a migratory life in pursuit of his business; the craftsman in the completion of his mastery of his trade as a journeyman; the knight went in constant pursuit of adventure, gain, or warfare; the pilgrim had the blessing of the Church, the monk passed continuously to and fro on official journeys or penances; students were drawn to the centers of learning from most remote quarters, and went from school to school in quest of learning, of a more renowned teacher, of scholarships or bursaries, of a patron or a more generous community, of gain, or of the mere love of travel or the knowledge to be gained by it. The wandering priest was the forerunner of the wandering and begging scholar. As early as the fifth century, synods and bishops attempted to control the evil of the number of unattached priests who lived by begging. The coming of the friars in the twelfth and thirteenth centuries gave great encouragement to these customs, especially among students, who in general shared the favors of Churchmen.

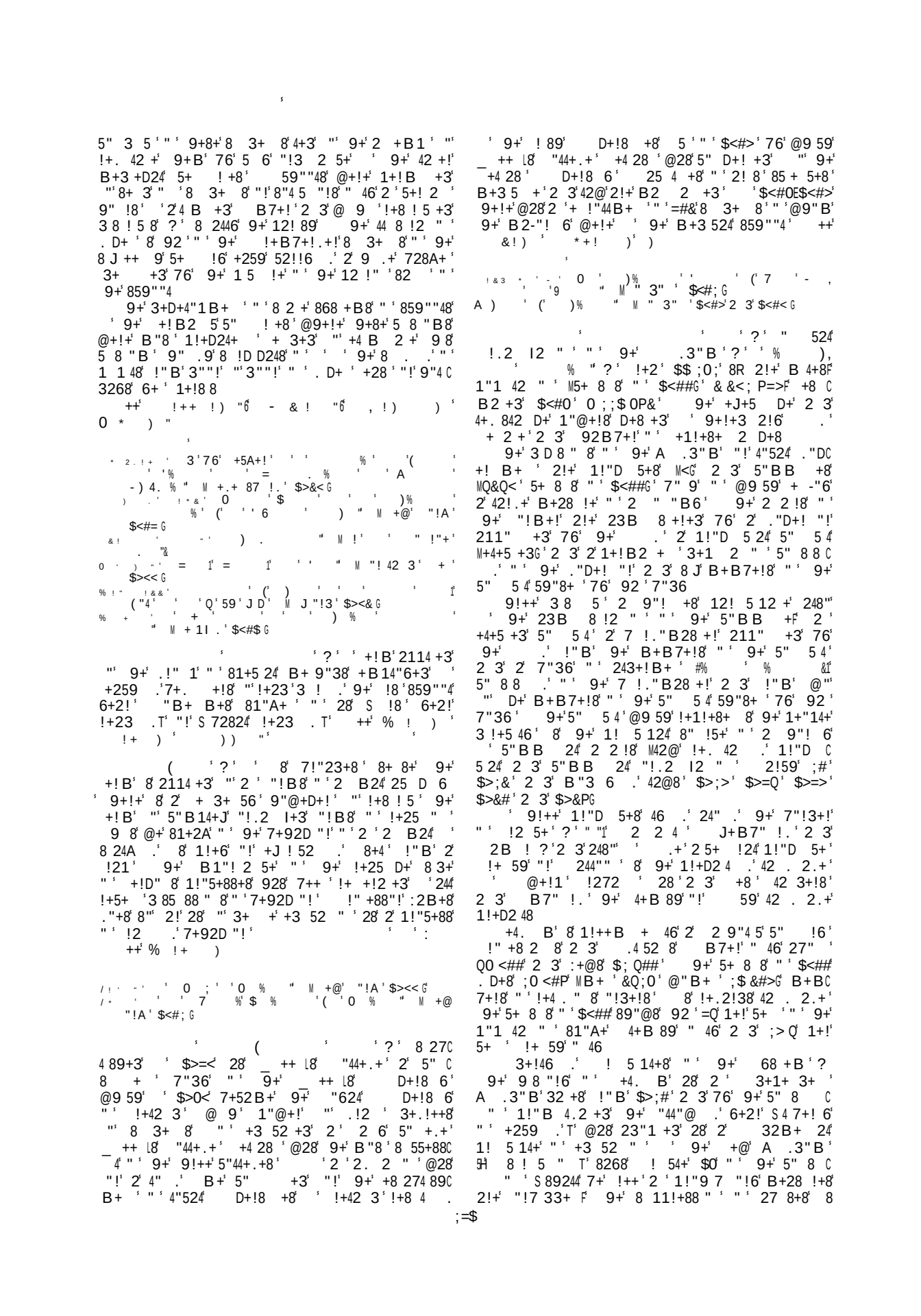
In the medieval universities all classes were represented, but a large proportion of the students were very poor. In some universities a special hall or dormitory (the *domus pauperum*) (*q.v.*) was provided for them. At the Oxford halls a special table was usually provided for them, as they must first wait upon the students at the other tables. Street begging was permitted at Oxford by license of the Chancellor. Frequently university or college statutes provide regulations for this custom.

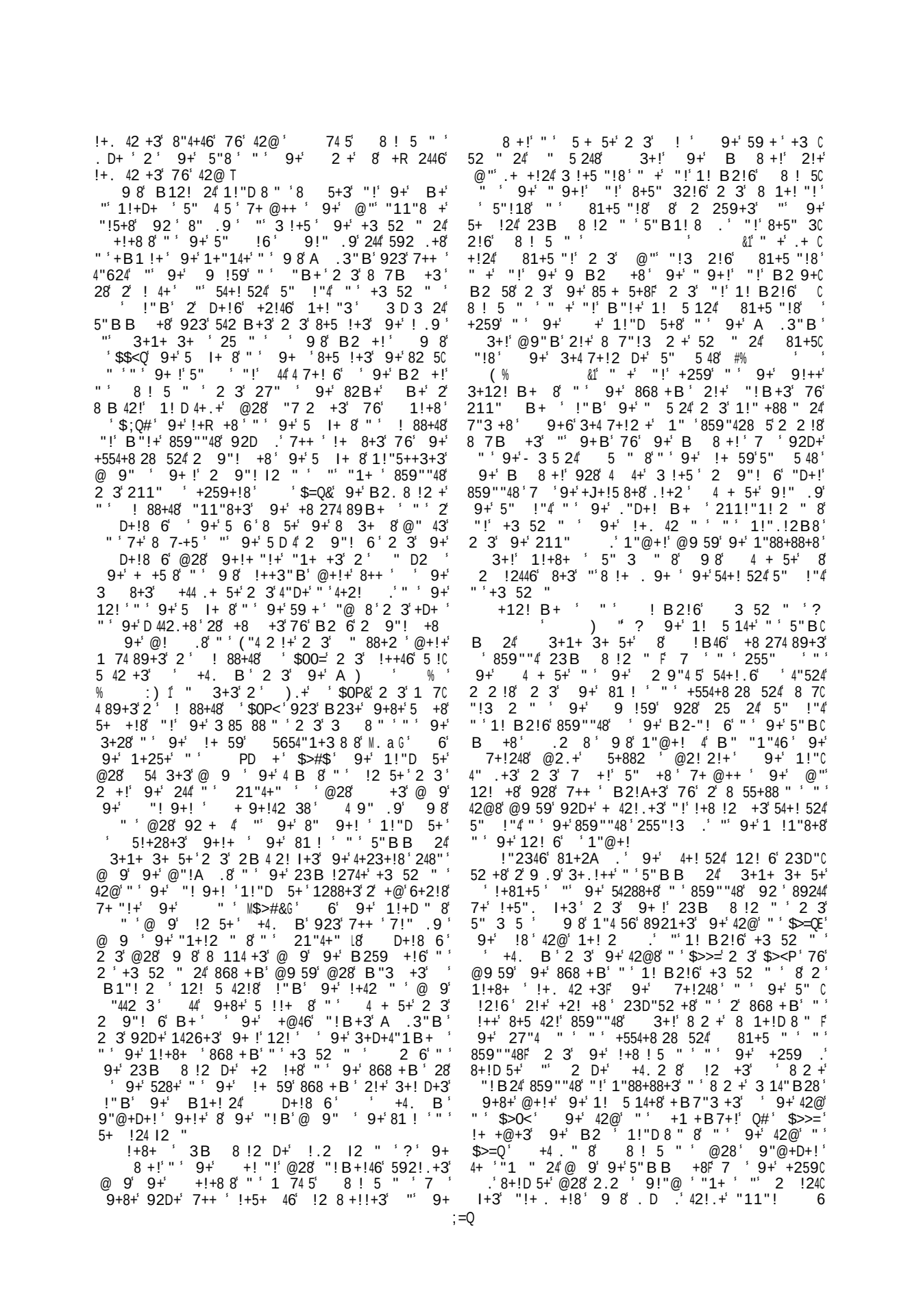
Such a life came to be adopted by many through preference, and was often persisted in

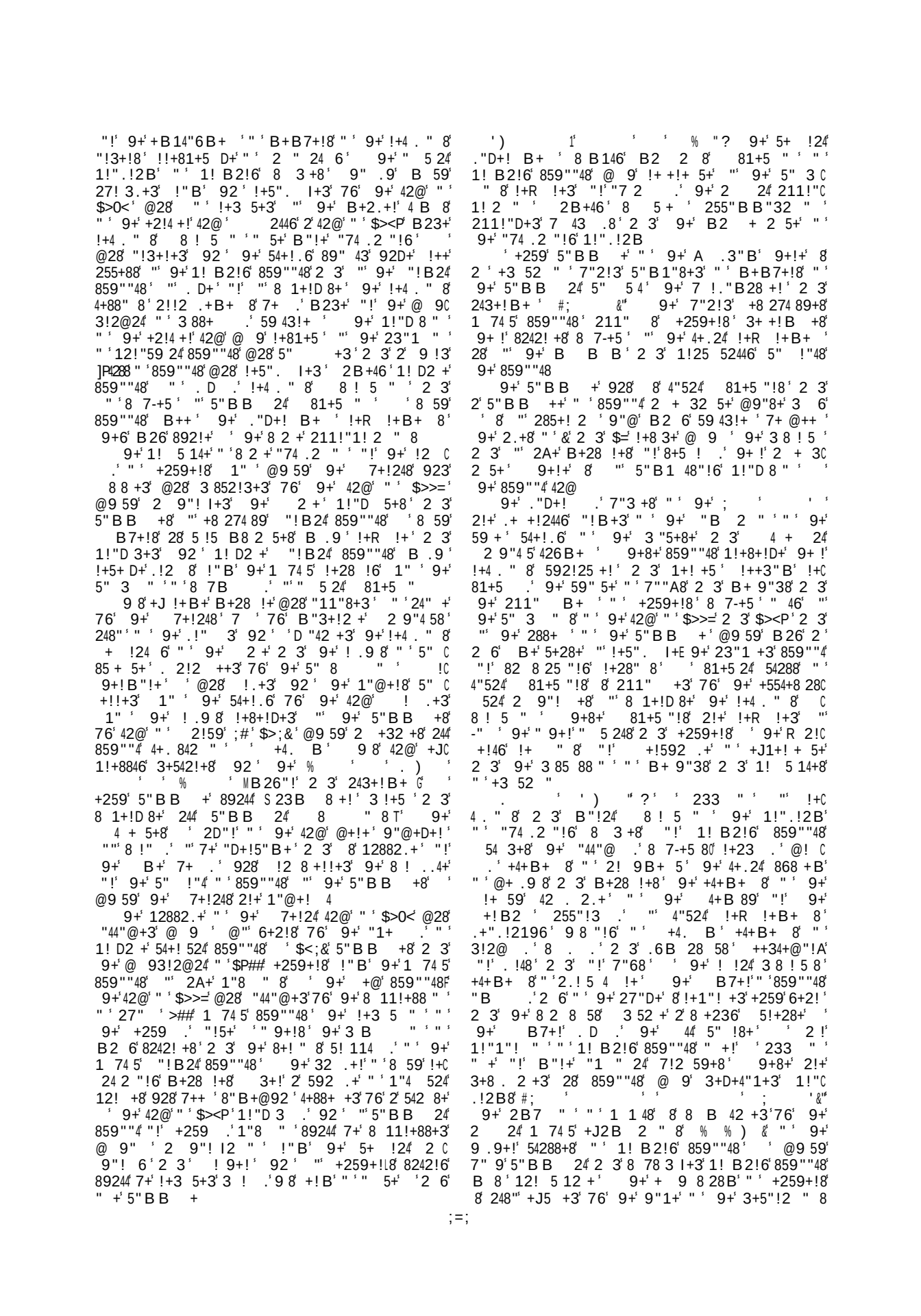
Begging Students of the Middle Ages.

for years. A secret society known as Goliards (*q.v.*) was developed. The general character of the life of the wandering student is discussed under these titles.

The begging customs were carried down into the lower schools as these came to be developed under church or town or later Renaissance influences. Here the older boys, bacchants (*q.v.*), adopted little boys, shooters (*q.v.*), as apprentices, — apprentices not only to learning, but to begging, to the *Wanderlust*, and often to vice. The number, importunities, and unlicensed







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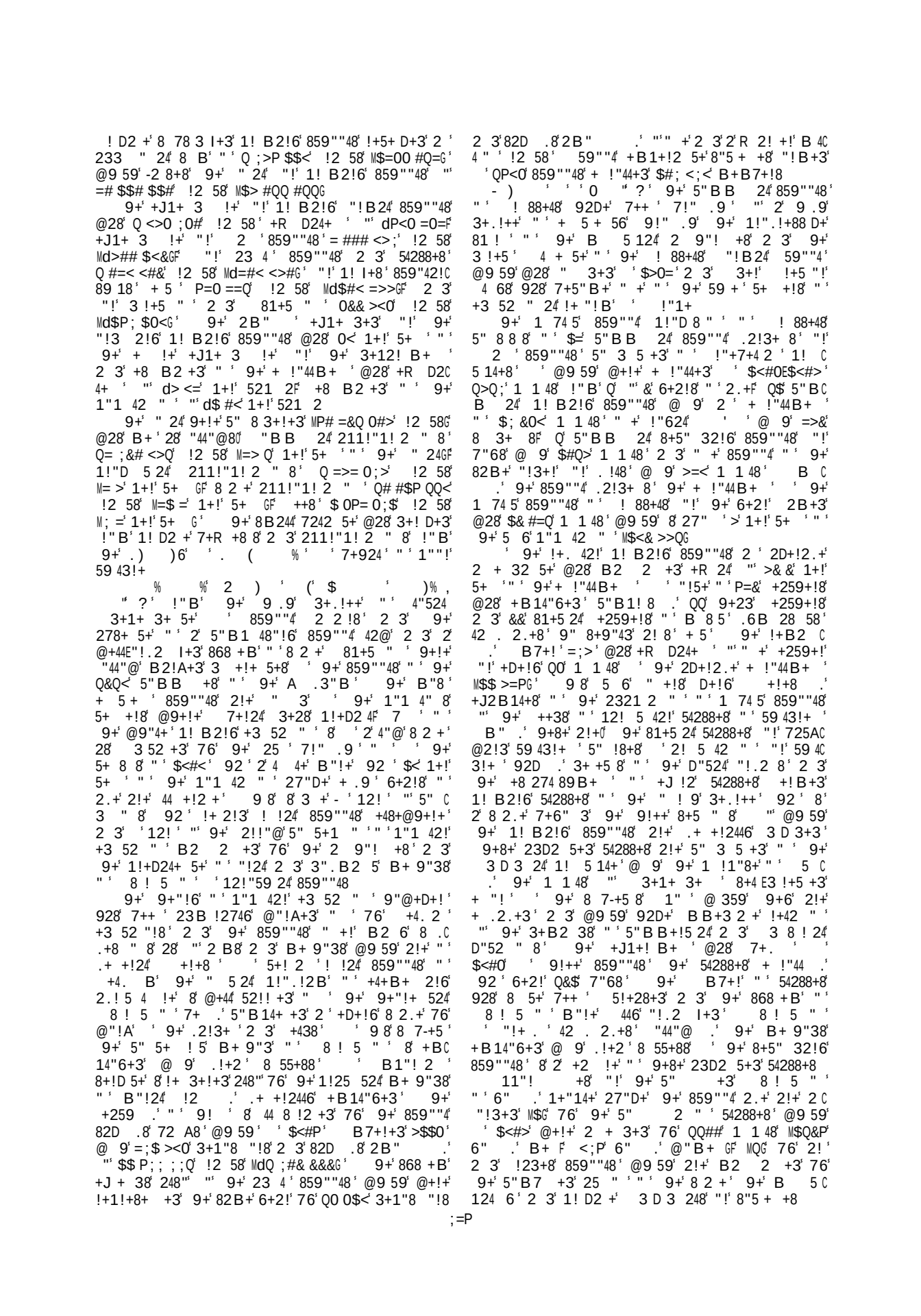

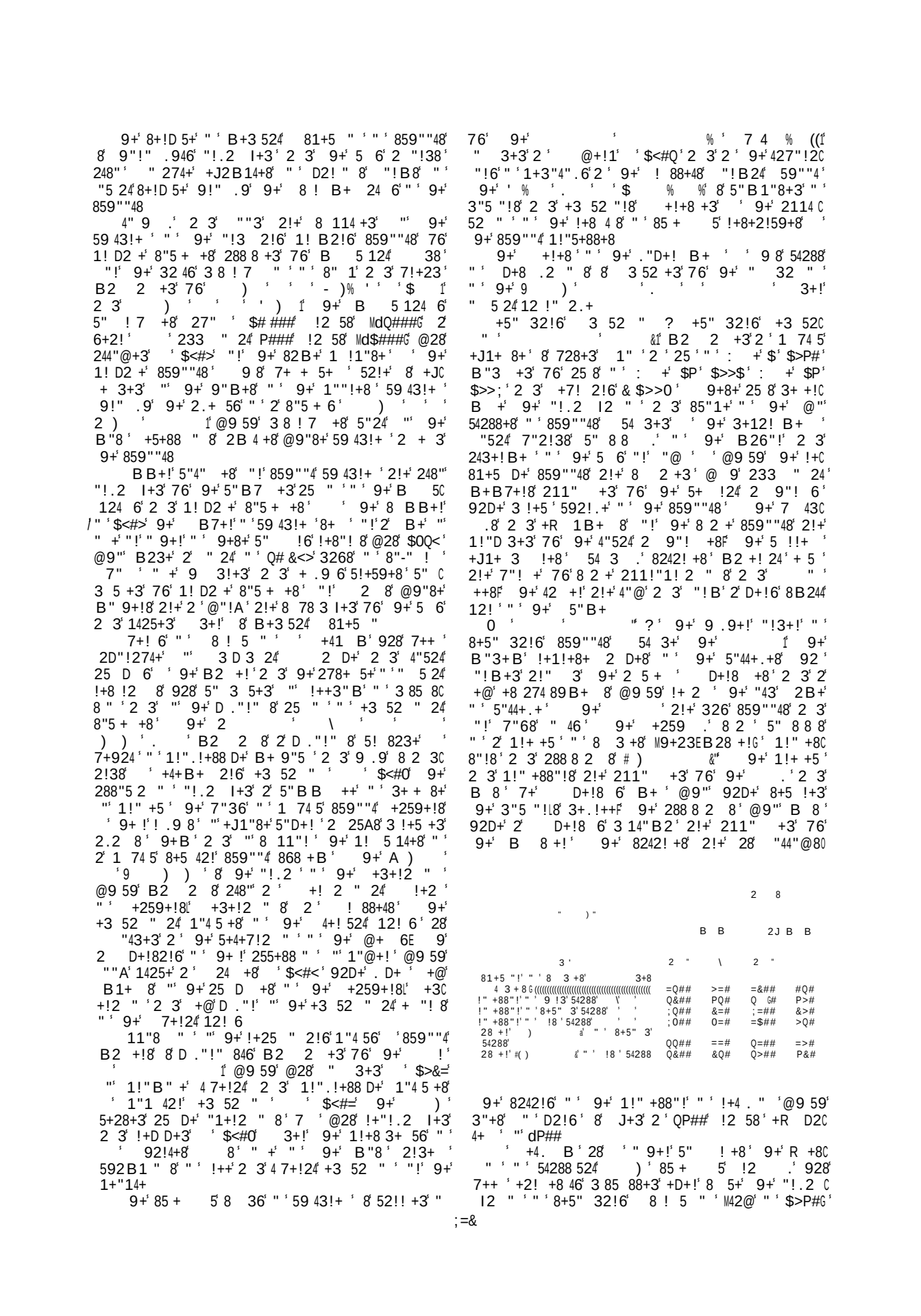

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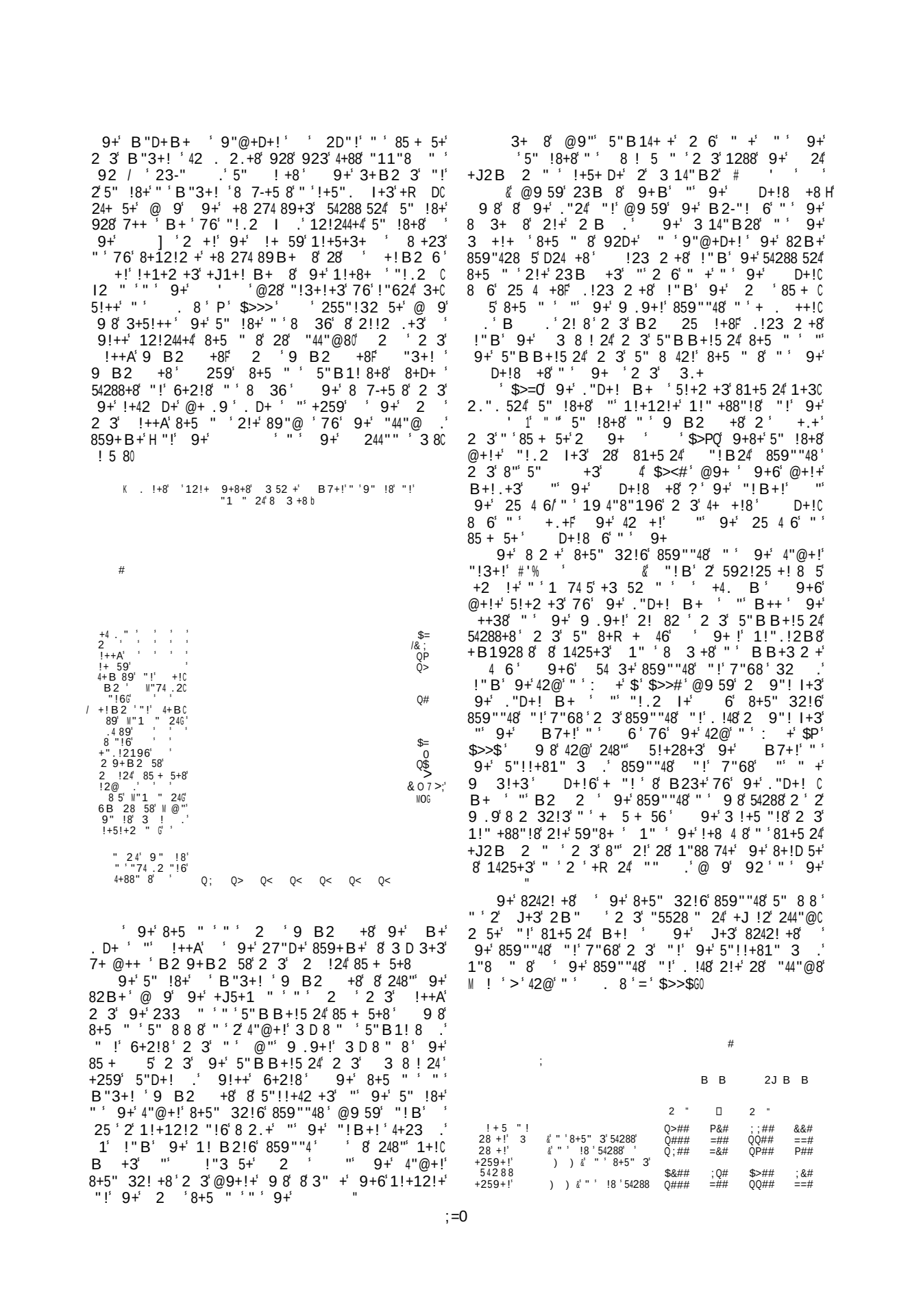

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9+ B"8 B1"! 2 B"3 52 " !"3 5+3 "! 9+ 4"@+!' "!3+!' " 8+5" 32!6 859""48 8 5+ 9+ !' +8 274 89B+ @28 + +5 +3 76 2 !+. 42! " " +1 +B7+!' $# $><0 @9 59 2 9"! I+8 9+ 859""48 "! 81+5 24 I+ 2 +!' 9+ !8 6+2!' " 9+ 5" !8+ 76 9+ 1!"D 8 " " 12!244+4 8+5C " 8 5"B B+!5 24 3 8 ! 24 "!' 2.! 5 4 !24 28 8 8 9+ 4"524 3+B2 38 9+!+ 9+ 81+E 5 24 I+3 1!".!2B8 2!+ 23"1 +3 9+ B7+!' " 9" !8 2 @++A "!' !+5 2 " 8 5!+28+3 "' ;$ "!' ;Q 2 3 B"3 52 " 8 " 9+ 1!+85! 7+3 1!".!2B8 2!+ B23+ 255"!3 . "' 9+ !+R !+C B+ 8 "' 2! 28 8 89"@ 76 9+ 8 2 8C 58 " 46 2 4 B +3 B7+!' " 9+ 859""48 92D+ 2D2 4+3 9+B8+4D+8 " 9+ 1! D 4+.+ 9+ 9+"!6 " 1 74 5 +3 52 " 28 928 3+D+4"1+3 +4. B .!+2 8 !+88 8 1425+3 1" !2 . 927 8 92 B2A+ "!' 9+ .+ C +!24 .""3 " 8"5 + 6 9! +B1+!2 5+ B 24 288 8 2 5+ 5 D 5 "74 .2 " 8 A 3 +88 "! 2! B248 2!+ 2 .9 1!25 524 @268 9+ 1! B2!6 859""48F 9+ 8+5" 32!6 859""48 9+8+ B+ 9"38 2!+ !++ "!5+3 76 868 +B2 5 4+88" 8 "44"@ .+J5+44+ " 5 24 1!".!2B8 9+ BC B+3 2 +!+8 4 8 " 9 8 8 ! 5 " 2!+ 8++ 9+ B+!" 8 8"5 + +8 " 1 1 48 "!B+3 "! 1!"B" +9+ 8"5 24 2 3 B"!24 + 38 &@9 59 9+ 8 ! 5 " 8 3 !+5 +3 59 2!+ 9+ 54 78 " S 4+ !" +5 "!8 T "!' 9+ 1!+8+!D2 " " 7 !38 2 3 2 B248F 8"5 + +8 "!' 9+ 1!"C +5 " " !++8 2 3 142 8F +B1+!2 5+ 8"5 +C +8 + 5

' % ' %) %) "? 9+ 42@" $>P# 2 9"! I+3 9+ +8 274 89B+ " 8+5" 32!6 859""48 76 4"524 2 9"! +8 2 2!1"C D 8 " 5" !B+3 76 8 78+R + 42@8 !+42 D+ "! 9+ 8+!D 5+F 8 78 3 I+3 76 9+ .+ +!24 ."D+! B+ 9+8+ 859""48 B 8 5" "!B "! 9+ " 5 24 !+. 42 " 8 28 "! 1!".!2B +J 7""A8 2 3 9+ R 24 52 " 8 " ! 1!" +88"!8 3+!' 1!+8+ 5" 3 " 8 9+ .!+2 +! B7+!8 " 9+8+ 4"524 8 " 8 2!+ 5" !"44+3 76 9+ 9 !59 "!' 76 !+4 . " 8 "!3+!8

' % ' % "? "!' 9+ !2 . " 1!" +88"!8 "!' 9+ 4"@+!' 8+5" 32!6 859""48 "!' 7"68 9+ 2 B2 2 8 @"' "!B24 859""48 " +2 9+ 9+ " 9+!' 2 D+44+8F 2 3 "!' 9+ 859""48 "!' . !48 @"' 8 B 42!' C 8 " 8 8 2 +3 !+81+5 D+46 2 ! 88+48 2 3 +.+

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.9+!' 8+5" 32!6 859""480 ? #] ' " ' ' "B B 83 5"4C 4+.+8 ' ' ! D2 + 5"44+.+8 ' /) f /) 3 F7 ;' Q# P><# $==$ =<# ;<P< 0 0Q0 Q=P =# ==Q > $$P& $#;= $QQ

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9+ B7+!' " ' " 9+!' 859""48 @9 59 2!+ 3" .' @"!A " ' 2 8+5" 32!6 592!25 +! 2 3 9+ 8 3+ + !"44B+ ' +259 7 . D+ ' 9+ "44"@ .' 274+0

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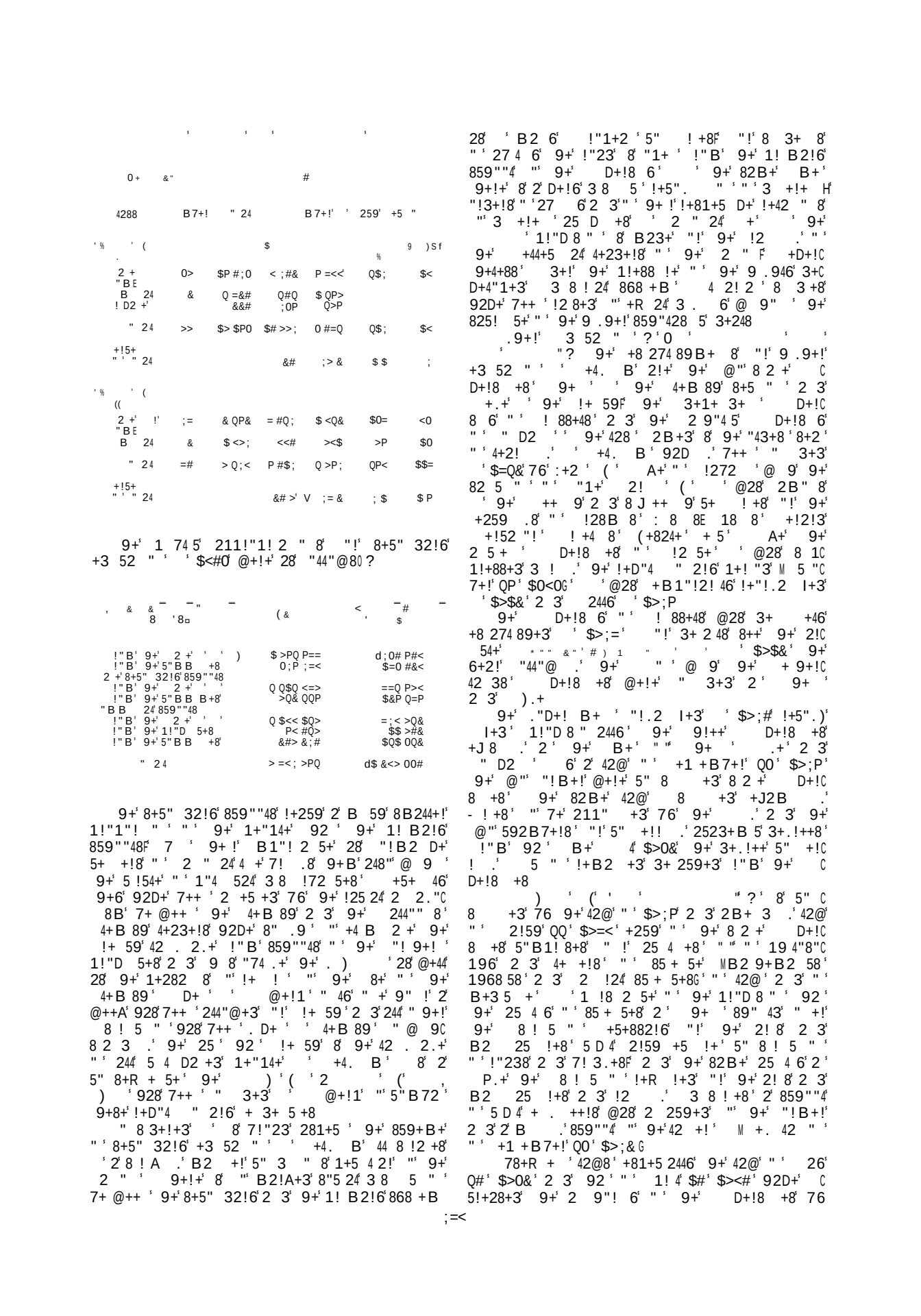

255"!3 .' 9+B' 2' !+1!+8+ 2 " ' ' 9+' +J2B C .'- ! +8' 7 ' 9+ !' 5" 8 " ' 2 3' 859"428 5' 5 " 8' !+B2 ' 8 78 2 2446' 28' 3+ +!B +3' 76' 9+' 42@' " ' $>=<

$ ('' ?' 9+' +259 .' 5"!18' 5"BC 1! 8+8' 1!" +88"!8' "!3 2!6' 2 3' +J !2"!3 2!6' 211" +3' 76' 9+' .' 9+6' B 8' 92D+' 2' 3"5 "!L8' 3+.!++' 2 3' B 8' 3+D" +' 9+B8+4D+8' +J54 8 D+46' "' 9+ !' D+!8 6' 3 +8' 9+8+' 3 +8' 28' 248"' 9+' 1! D 4+.+8' @9 59' 1!" +88"!8' + -"6' 2 3' 9+' 1+ 24 +8' "' @9 59' 9+6' 2!+' 8 7-+5 ' 2!+' 1!+85! 7+3' 76' 9+' 42@' "!' 76' !"624' 3+5!++8' 9+' 2 24' 8242! +8' 2!+' 0#### !2 58' Md$=##G' "!' +J !2"!3 2!6' 1!" +88"!8' 2 3' P#### !2 58' Md$####G' "!' "!3 2!6' @ 9' 2' 1"88 74+' 2 .B+ 2 " ' " ' !"B' $#### "' ;#### !2 58' MdQ## "' d&##G' !" +88"!8' 2!+' !+ !+3' 28' ' @ 9' 2 ' 2 24' 1+ 8 " ' +R 24' "' 9+' 2D+!2.+' 8242!6' " ' 9+' 428 ' D+' 6+2!8' " ' 8+!D 5+' @9+ ' 9+6' !+259' 9+ !' 8+D+ + 9' 6+2!' "!' ' 3 8274+3' 76' 8+! " 8' 2 3' 1+!B2 + ' !B 6 1+5 24' 1!" +88"!8' 5244+3' 1' 2!+' 288 . +3' "' +259' D+!8 6' ' 8 59' B7+!8' 2 3' "!' 8 59' 5" !8+8' 28' 5 !5 B8 2 5+8' B26' 3+B2 3' 9+' 5" 3 " 8' " ' 9+' 8+!D 5+' 92D+' 7++ ' 9+' 8 7-+5 ' " ' B2 6' 3+5!++8' ' 1!+8+ ' 281 !2 8' B 8' 92D+' 2' 3"5 "!L8' 3+.!++' 2 3' 248"' 2' 81+5 24' 3 14"B2' 3 52 .' 9 .9' 2 2 B+ 8' ' 8"B+' 3 8 5' 3+12! B+ ' " ' A "@4+3.+

9+' 5" !8+8' @9 59' 9+' (' . D+' 2!+' 23C 3 " 24' "' 9+' !+. 42!' 5" !8+8' 9+6' 92D+' "' 8242! +8' 7 ' B26' !+5+ D+' ++8' 2 3' B26' 7+' + .2.+3' ' " 9+!' 1 !8 8' 28' 42@' B+3 5 +' + 5' 9+' 1' 2 !2446' 7+5"B+' 52 3 C 32 +8' "!' D252 ' 592 !8' 8"' 92 ' 9+' 8+!D 5+' 8' ' 2' 8+ 8+' 2' 1!+12!2 " ' "!' 44' 1!" +88"!89 18' 9+!+' 2!+' 248"' 288 8 2 8' "!' 427"!2 "!6' +J+!C 5 8+8' 2 3' 54 58

((% ' (' '' ? 9+' " 5 24' 2 C 9"! +8' " ' +259' D+!8 6' 2!+' 9+' !+5 "!' 9+' 8+5!+ 2!6' 9+' 3+2 8' " ' 25 4 +8' 9+' 2523+B 5' 5" 5 4' 2 3' 9+' % ' ') '' 9+' !+5 "!' 8' 211" +3' 76' 9+' .' "!' 2' +!B' " ' 9!+' 6+2!8' +' 8' 9+' +J+5 D+' 9+23' " ' 9+' D+!8 6' 2 3' 928' .+ +!24' 592!.+' " ' 244' 8' 2 2 !8' +' B26' 2 ' 9 8' @ 44' 5" D"A+' 9+' % \ ') ' "!' 23D 5+' 9 8' 7"36' 5" 8 8 8' " ' 9+' 8+5!+ 2!6' " ' 9+' 2523+B 5' 5" 5 4' 2 3E 9+' 3+2 8' " ' 25 4 +8' 9+' 42 +!' 28' 248"' 9+' 8+5!+ 2! +8' 2!+' 59"8+ ' 76' 9+' 1!" +88"!8' 9+B8+4D+8' 2 3' 2!+' 9 8' 9+ !' 3 !+5 '!+1!+8+ C 2 D+8' 9+' 2523+B 5' 5" 5 4' 5" 8 8 8' " ' 244' 9+' 1!" +88"!8' " ' 2' D+!8 6' @9"' ' 9+ !' 5"44+5 D+' 52125 6' 3+ +!B +' 9+' 5" 3 5 ' " ' 9+' 859"428 5' 2 2 !8' 28' 9+' B2 2.+B+ ' " ' 5" !8+8' B+E 274+8' + 5' 9!" .9' 9+8+' 23C D 8"!6' 5 " 8' 9+' 1!" +88"!8' 92D+' !+2446' 2' D" 5+' ' 9+' 23B 8 !2 " ' " ' 9+' D+!8 +8' 9+ !' 59 + ' B1"! 2 5+' ' 9 8' !+81+5 ' 9"@+D+!' 4 +8' ' 9+' 25 ' 92 ' 9+6' 2!+' !+1!+8+ +3' ' 9+' % ' ' (% ' " ' 8 1+! "!' 8 ! 5C " ' @9 59' 9+' B 8 +!' B 8' 5" D"A+' 2 ' 4+28 ' " 5+' 2' B" 9' 9+' 5" 8 " ' " ' 9 8' 5" C 5 4' 8' 28' "44"@8' + .9' 1!" +88"!8' M!+1!+8+ .' 9+' 25 4 +8' 2 3' 81+5 24' 859""48' " ' 9+' D+!C 8 +8G' 9+' @"' !+5 "!8' 9+' @"' ."D+! B+ ' 81+5 "!8' #) &!' 2 3' " 9+!' B+B7+!8' " ' 9+' +259 .' 1!" +88 " ' 59"8+ ' 76' 9+' B 8 +!' 9 8' 5" 5 4' . D+8' 23D 5+' 1" ' 244' B2 +!8' 1+! 2 .' "' 8 1+! "!' 8 ! 5C " ' ' 89" 43' 7+' 233+3' 92 ' @9 4+' 9+' !+5 "!8' 92D+' .+ +!24' 592!.+' " ' 8 3+ 8' 9+' 1!" +88"!8' +J+!5 8+' 3 85 14 2!6' 2 9"! 6' "D+!' 9"8+' " ' 9+ !' !+81+5 D+' 54288+8' 2 3' B26' +D+ ' 8 81+ 3' 2' 3 8"!3+!46' 8 3+ 2 ' (' ') '' ? ' 3+ 8' 2!+' !+5+ D+3' 2 3' + !"44+3' 76' 9+' !+5 "!' 9+' ++' "!' + !"44C B+ ' 7+ .' $P' !2 58' Md;G' +!' 9 8' "!C B24 6' 8' 5"B14+ +3' 9+' 8 3+ ' 2A+8' " ' 2' 5A+ ' "!' 9+' 8 3 +8' " ' 9+' 5" !8+8' 9+' 1!"1"8+8' "' "44"@' 9+' ++' "!' 9+' 5A+ ' 8' QP# !2 58' MdP#G' 19 4"8"196' 4 +!2 !+' 2 3' 42@' 2 3' Q## !2 58' Md=#G' 9+' " 9+!' 25 4 +8' 9+!+' 2!+' 248"' ++8' "!' 9+' 8+' " ' 427"!2 "! +8' "!' 54 58' + 5 ' 2 3' +J !2' ++8' "!' 81+1 24' 4+88" 8' "!' 5" !8+8 ' ') '' ? ' 8 ! 5 " ' 8' . D+ ' ' 9+' !+ 59' 42 . 2.+' +J5+1 ' 76' 81+5 24' 3 8C 1+ 82 " ' !"B' 9+' B 8 +!' ' 4+88" ' "55 1 +8' 2 ' 4+28 ' 2 ' 9" ! ' " !8+8' B 8 ' 7+' 8"' 2!!2 .+3' 92 ' 9+' 8 3+ ' 928' " ' 4+88' 92 ' 9!++' 9" !8' " ' 4+88" 8' +259' 326 ' 7+8 3+8' 54 58' 2 3' 427"!2!' "!6' +J+!5 8+8' 9+' B B B' 3 !2 " ' " ' 9+' D2! " 8' 5" !8+8' 8' 3+ +!B +3' 76' 9+' !+R !+C B+ 8' "!' 3+.!++8' @9 59' @ 44' 7+' 5" 8 3+!+3' 9+!+2 +!' + 32 5+' 1" ' 9+' 4+88" 8' 8' "74 .2 "!6' 2 3' +D+!6' 9!++' B" 98' 9+' 1!"C +88"!8' !+1"!' " "' 9+' !+5 "!' 8 3+ 8' @9"' 2 4' ' 9 8' "74 .2 "

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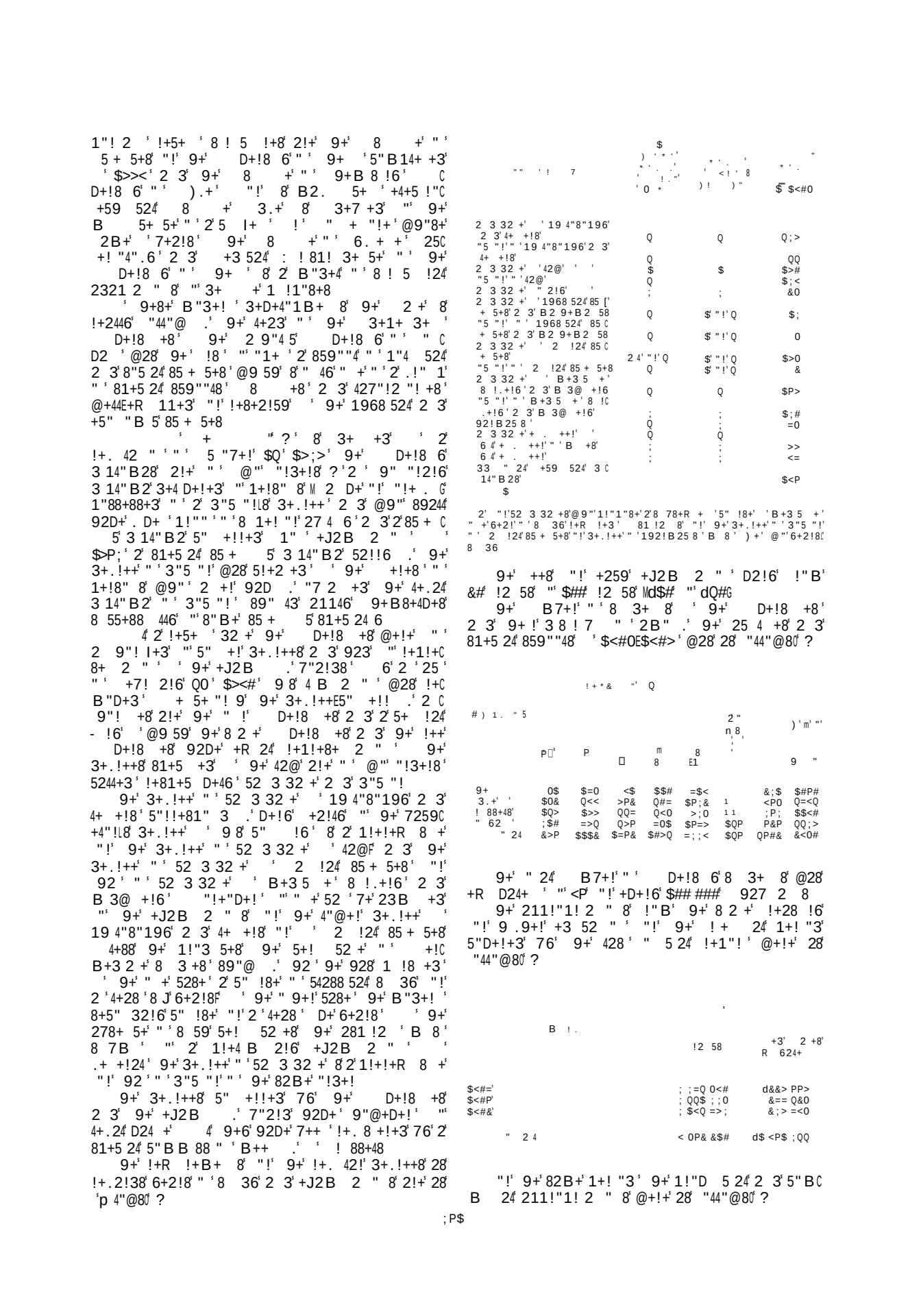
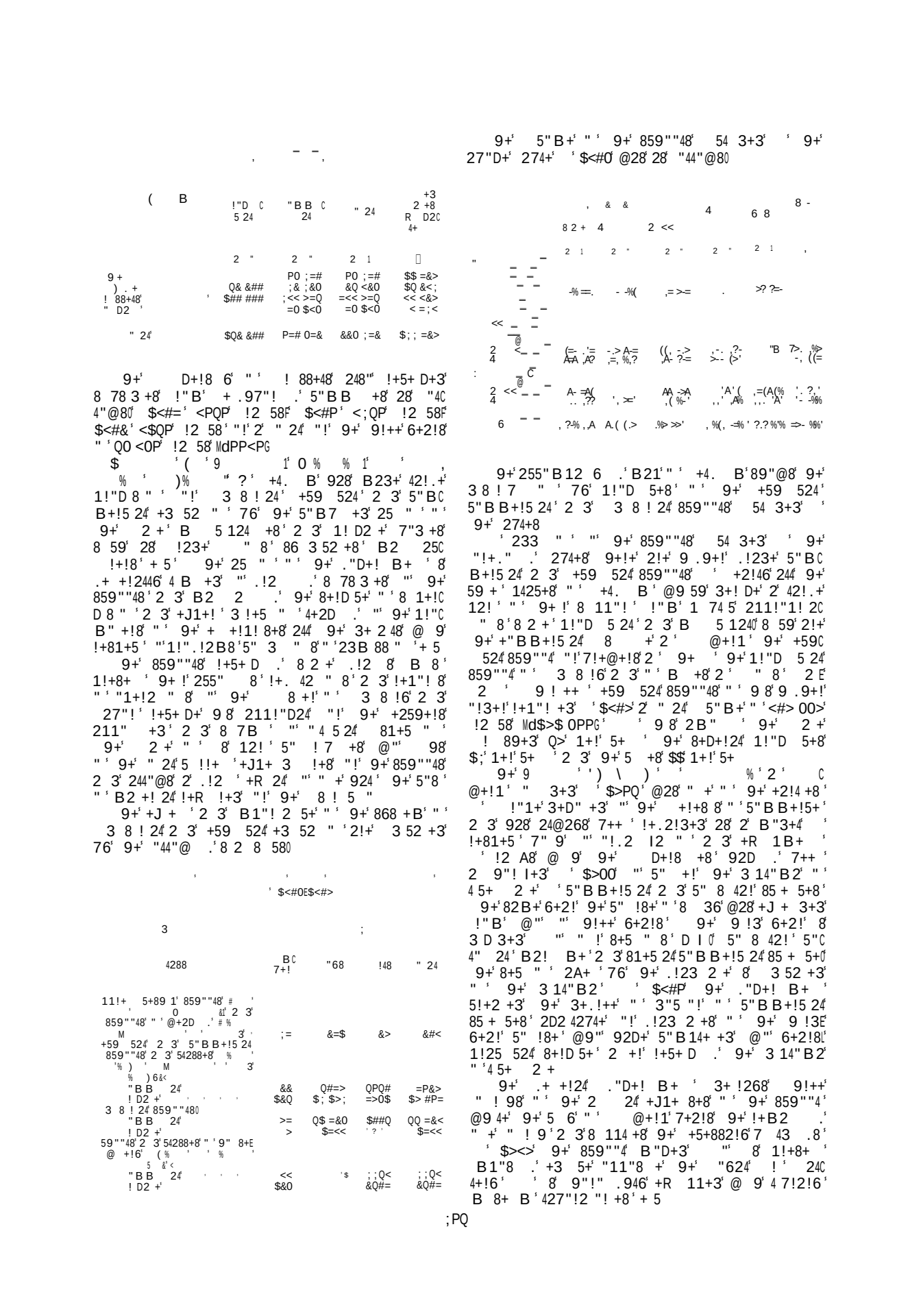
% ' ' + '' ? ' 9+' B"8' B1!+88 D+' 25 ' ' 9+' !+5+ ' 9 8 "!6' " ' 9+' +4. 2 ' D+!8 +8' 8' 9+' 5!+28+' ' 9+ !' +R 1B+ ' "!' 85 + 5' 8 ! 5 " ' 2 3' !+C 8+2!59' 9+' .!"@ 9' ' 9+8+' !+81+5 8' 8' 44 8 !2 +3' 76' 9+' B+!" 8' 8 +8' 92 ' 92D+' 3+D+4"1+3' 28' 23- 5 8' "' 9+' 25 4 +8' 4 9" .9' "! . 2446' 9+' 28A' " ' ! 89 .' 8 274+' 7 43 .8' "!' 9+' 8 2 +' D+!8 +8' @28' 4+ ' "' 9+' 5 +8' '@9 59' 9+6' @+!+' 4"52 +3' 8 5+' 9+' 12882.+' " ' 9+' 42@' " ' $>0P' @9 59' +J1!+8846' 1!"D 3+3' "!' 9+' +J + 8 " ' " ' 9+' 85 + 5' @"!A' " ' 9+' D+!8 +8' 9+' 5+ !24' ."D+! B+ ' 928' B23+' 42!.+' 211!"1! 2 " 8' "!' +@' 7 43 .8' 2 3' +R 1B+ 8' B" .' BE



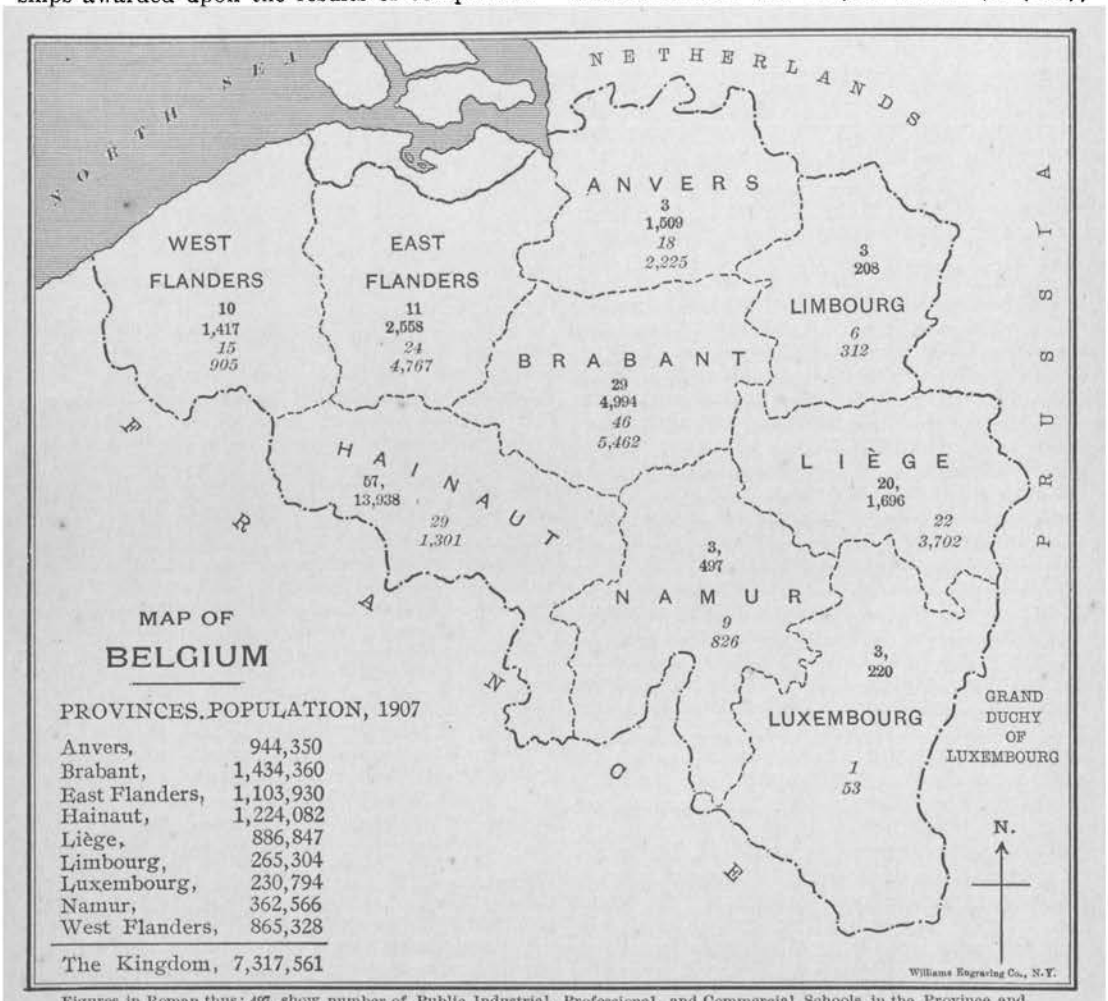


The management is in the hands of a board of directors in which the ministry of labor and industry and the city of Antwerp have equal representation. The liberal spirit of the administration is indicated by the low tuition fees, which include a matriculation fee of 25 francs ($5) and tuition fees amounting to 200 francs ($40) for the first year, and 250 francs ($50) for each succeeding year, and by the assistance afforded students by means of scholarships awarded upon the results of competitive examination. A number of traveling scholarships are allowed each year for advanced students, who are thus enabled to pass the long vacation in England or Germany with a view to perfecting themselves in the foreign language.

Agricultural Education. — Provision for teaching agriculture is made both in the ordinary schools and in special schools. The latter pertain to the ministry of agriculture in which a special department of education has been created under the direction of a principal inspector, who must be a university graduate and provided with a diploma of agricultural engineer. In addition to a lecture system maintained in the interests of the farmers of the country, and numerous secondary schools of agriculture, there is a high-grade state agricultural school at Gembloux, and a state school of veterinary medicine at Cureghem.

In 1898 the state appropriation for agricultural education was 470,500 francs ($94,100); in 1908 it was 755,500 francs ($151,100). This was an increase of 60 per cent; but in the same time the appropriation for industrial education tripled, rising from 650,000 francs ($130,000) to 2,150,000 francs ($430,000). The disparity between the two is emphasized by the fact that the number of people engaged in agricultural pursuits is equal to the number in the industrial vocations.

Instruction in the Fine Arts. — The acade-



Figures in Roman thus: 497, show number of Public Industrial, Professional, and Commercial Schools in the Province and enrollment in same. Figures in Italic thus: *905*, corresponding items for Private Schools.

B +8 " 2! 8 8 78 3 I+3 76 9+ 2 + 2 3 9+ 1!"D 5+8 +J+!5 8+ 2 4 + 5+ "D+! C 3 8 ! 24 2! 76 9+ 3+248 @9 59 9+6 +B 7"36 2 3 76 9+ +259+!8 @9"" 5"B + 3+! 9+ ! 3 !+5 8 ! 5 "

9+ "624 523+B 6" + ! 8 2 @+!1 923 <=0 8 3+ 8 $<#0 E" @9"B 2 42!.+ 1!"1"! " @+!+ 2! 82 8 9+ + .9 6E D+ 1!"D 5 24 2523+B +8 " 2! + !"44+3 $P >>& 8 3+ 8

9+ + !"44B+ " 8 3+ 8 9+ " !!"624 5" 8+!D2 "! +8 " B 8 5 9+ 82B+ 6+2! M$<#0 @28 28 "44"@80

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7!2! +8 2 3 +2! +3 "5 + +8 ?' +4 . B 8 3 8 . 89+3 76 9+ B7+! 2 3 B1"! 2 5+ " 8 4 7!2! +8 @9 59 28 2 ! 4+ 2!+ " 1! D2 + "! . 2 3 3+! D+ 9+ ! 8 11"! !"B 1! D2 + 8" !5+8 9+ ."D+! B+ 9"@ +D+! 5" ! 7 +8 D2! " 8 @268 " 9+ ! 25 D +8 9+ 5"B B 24 4 7!2! +8 @9 59 "@+ 9+ ! 3 8 " " 9+ + "! 8 " 9+ ! B7+!+3 >$< $<#0 3 8 ! 7 +3 &Q= 5"B B +8 2 3 !+1"! +3 2 " 24 " Q #&> ; ; ;' D"4 B+8 @ 9 2 6+2!46 5 !C 5 42 " "" " +2 3 2 924 B 44 " 9+ "624 7!2!6 2 ! 88+48 8 5+4+7!2 +3 24 A+ "! 8 5"44+5 " 8 2 3 9+ ! 23B !274+ 54288 52 " 9+ 9 .9 3+D+4"1B+ " 4 C 7!2!6 85 + 5+ +4. B 8 44 8 !2 +3 76 9+ @"!A " 9+9 ((% (- . @9 59 928 "! 8 "7-+5 9+ +8 274 89B+ 2 3 1 74 52 " " 2 D+!824 74 ".!219 524 3+J 9+ 8 1146 " 9 8 3+J " 8 " 8 2 38"5 + +8 !+R +8 .' 9+ 82B+ 2 3 9+ 8 36 " 244 R +8 " 8 !+42 .' " 7 74 ".!219 524 1 !C 8 8

B" .' 9+ B2 6 4+2! +3 8"5 + +8 @9 59 " +! 5+ D+8 " 4 +!2!6 25 D 6 2 3 85 + C 5 !+8+2!59 9+ B"8 " +3 2!+ 0 % ('% % 1 1 2 (-) 1 @9 59 1 74 89+8 B1"! 2 B+B"! 248 76 +4. 2 2 3 "!+ . 859"42!8 2 3 B2 2 8 1! I+8 "1+ " .+ +!)5"B1+ " F 0 2 , % 1 @9 59 5" 5+! 8 8+4 12!C 5 42!46 @ 9 9+ 8 36 2 3 5 4 !+ " 9+ 42 . 2.+ 4 +!2 !+ 2 3 9 8 "!6 " 9+ + 9+!C 42 38 0 % (% 1 @9"8+ "7-+5 8 2!+ " 5" 8 3+! R +8 " 8 8 7B +3 76 9+ ."D+! B+ 2 3 " B2 2 D+8 .2C " 8 4""A .' " 9+ 1!+D+ " 2 3 85 + 5 !+2 B+ " " 3 8+28+ 9+ "624 8+ B " 2 !24 8 "!6 2 ! 88+48 2 3 9+ N""4". 524 2!3+ " " @+!1 2!+ " 274+ 8 " 8 U " 9+ 23B 8 !2 " " 9 .9+!+3 52 " 1+! 2 8 9+ 592!.+ " 1 74 5 211!"1! 2 " 8 "!85 + 5+ 2 3 4+ +!8 9+8+ 38 2!+ 8+3 9+ 2 24 B2 + 2 5+ " @" +4. 2 859"4C 2!8 9"43 .' 9+ 3"5 "!L8 3 14"B 2 2 9+ !+ 59 859""4 2 9+ 8 "! 9+ 8 11"! " 2 274+ 2 9+ N""4". 524 2 " 214+8 2 3 2 8+5" 3 2 9+ 27"!2 "!6 " +"1"43D 44+ M " ."GF "! 9+ B2 + 2 5+ " 2 5+! 2 B7+! " ! + 24 R R + 24 2 3 3+5+ 24 1! I+8 2@2!3+3 "! 259 +D+B+ 8 3!2B2 5 4 +!2C !+ M !+ 59 2 3 4+B 89GF 2 3 "! 9 8 "! 5 85 + 5 2 3 19 4"8"19 524 !+8+2!59+8 9+."D+! B+ 248" B2 2 8 5"B B 88 " 8 592!.+3 @ 9 9 8 "! 5 2 3 85 + 5 D+8 .2C " 8 8 59 28 0 - (9 9 % 2 3 0 (' % " 9+ 42 +! 2B" ." " 9+! 3 +8 3 !+5 8 9+ 8 2 8 524 1 74 52 " 8 " 9+ D2! " 8 +J+5 D+ 3+12! B+ 8

! (.) . ') " 3 = M !2B+! +8 +4. B $<#>G $$PO 1 >X " 8+ 4 8 1)! + ! 3+ L 3 8 ! + + 3 5"B B+!5+ , '% % " M ! J+44+8 $<#=G =I ! (" ' ! -" % ' -) % - % " M 2B7! 3.+ $<#QG &;1 $QI " ! . ' ! * +) " M ! J+44+8 $<#<G Q> 1 >I !+5 " 3+ L+ 8+ . +B+ 3 8 ! +4 + 1!" +88 " +4 1 $><OE$<#$ M ! J+ +8 $<#;G Q D >I * + ! * < (! + %) - :) " M ! J+44+8 $>;>G ;(' $&I - . ") ' &) . % - :) ")) 6 " M ! JC + +8 $><;E$><&G ;' D $QI 1 2 ! % (- :) " M ! J+ +8G B8 P!+ 3+ L 8 ! 5 " 1 74 R +) 6)) 1 6) 1 $<#= $<#P $<#&F 6) 1 $<#; $<#= $<#PF)% 1 $<##' $<#$' $<#Q' M ! J+ +8G 8 P!+ 3+ L 8 ! 5 " 1 74 R + %) (') 1 $; D"48 $' >I !+12!+3 "! 9+ D+!824 J1"8 " " 2 " 8 8 +!8 3+ L)! + ! + 3+ L2.!5 4 !+) :) " M !+ +E + D &B+ &+ $<#>G M ! J+ +8G 8)+ 3+8 85 + 5+8 + 3+8 2! 8 (:) ! $>;#' $<#P' 2! ! (2 D+!E 7+!.9 + 5" 27"!2 + !8' Q D (% %) % % .) % " M ! J+ +8G M 9+ 42 +8 "! 9+ 6+2! $<#<G 0 !"" ! (; " 3 ; M .+' $> G Q=# 1 >I D+!8 6 52 9" R + 3+ " D2 1 " D2 (! * & 5 % " M ! J+ +8G ;P= 11 >I 4+8 " +3 52 " 24 -" ! 248 12! 5 42! ?))) 'M 44+ 3+ 42 636!2 " 3+ L+ 8+ . +B+ B "6+ G)% ( ) :) . M3 85" +3 8 5+ $><PG

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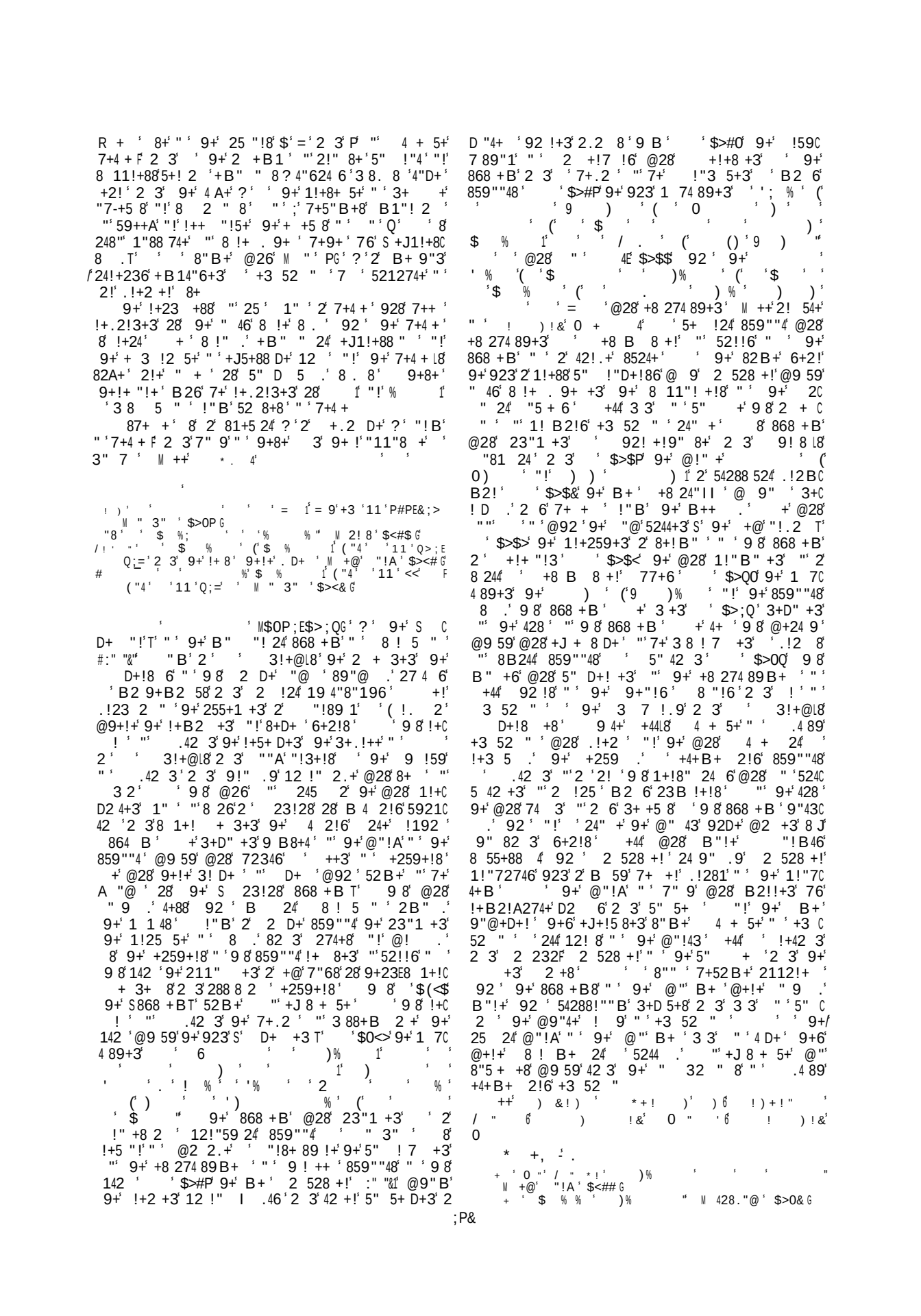

7 & :) ' : ' ' ' ')6 ! ' (1
+ " ! ' - " M 3 7 !.9 2 3 " 3" $>>$ G
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?' 5"!1"!2 +3 $>>#' 76' 9+ !+87-! +! 2
6 "3 " +7!28A2 2 3 "1+ +3 $>>;
5" 8 +8 12! " 9+ D+!8 6' " B292
9+ 8 " @9 59 8'5"+3 52 " 24 1!"D 3+8
2523+B 5 5"44+. 2 + "!B24 2 3 B 8 524
5" !8+8 3+ 8 2!+ 23B +3 " 9+
5"44+.+ 76 5+! 52 + !"B 255!+3 +3 859""48
2 3 76 2 +J2B 2 " !+R ! .' $= 8 " '
9 .9 859""4 @"!A 4288 524 85 + 5 2 3
1 4"8"19 524 5" !8+8 4+23 . " 9+ ! !+81+5
D+ 3+.!++8 2!+ " +!+3 9+ 5"44+.+ B26
88 + 9+ !8 .!23+8 2 +5+! 52 + " 9+ 2 +
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+5+882!6 !+R !+B+ 8 @9 59 8 D24 3 "! ;
6+2!8 2 3 B26 9+ 7+ 5" D+! +3 76 9+ 2 +
1+! + 3+ " 2 4 + 5+! 52 + "@+!
.!23+ 5+! 52 +8 2 + .!2 +3 9+ "!B24
3+12! B+ " @9 59 2 + .9 E.!23+ !2 .
859""4 8 2 259+3 9+!+ 2!+ $Q 1!" +88"!8
2 3 & 8 ! 5 "!8 2 3 288 8 2 8 +19+ "
""A+6 8 9+ 1!+8 3+

2 (? " E8+5 2! 2 8 " "!+ 9+
+3 52 " " 6" .@"B+ "44+.+ 1!+12!2
"!6 5"44+. 2 + 2 3 B 8 524 3+12! B+ 8 2!+
B2 2 +3 9+!+ 8 " 3+ +8 2 +B+ "
9+ !+R !+B+ 8 " 23B 88 " 14"B28 2 3
3+.!++8 2!+ 5" +!!+3 9+!+ 2!+ $ 8 ! 5 "!8
" 9+ 25 4 6

2 = 4
(? " E8+5 2! 2 5"+3 52 " 24 8 C
" "@ . 8 " 32 " " 9+ 1!"12.2 32 "
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9+"4". 524 3 52 " 9+ +8 "!.2 I+3
+@ "!A M$>=;G 2 3 +3 $>0= @ 9
2 "8 " 8"5 + 6 @92 42 +! M$><=G 7+52B+
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8 " + " 9+ Q; 5"44+.+8 "8 +!+3 "!+ 2 3+3
76 9 8 42 +! "!.2 I2 " 9+ " 3+!8
2 3 B"8 " 9+ ! + 38 " 9+ 5"44+.+ 92D+
7++ " .!+.2 " 24 8 8 2 3 !+87;! +! 2 8
7 928 7++ @2!B46 8 11"! +3 76 " 9+!
3+ "B 2 " 8 2 3 928 24@268 1425+3 2
9"!" .9 +3 52 " " 2 +D2 .+4 524 2 3 C
8+5 2! 2 728 8 27"D+2 6 " 9+!5" 8 3+!2 " 8
8 +2!46 28 $>=; 9+ ++3 " 2 +"44+.+ "! 9+
!+. " "1+ +3 "8+ 4+B+ 76 9+ 425A
2@A @2!' 9+ "! 9@+8 +!! "!6 @28
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" " " .!+.2 " 24 2 3 !+876 +! 2
59 !59+8 9+ "! 9@+8 @28 9+43 2 4+D+C
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+4" 2 3 92 "@ @28 8+4+5 +3 28 +4
" 2 5"44+.+ "!' 85" 8 2 3 44 " 8 42!.+46
7+52 8+ " 8 1"8 " " 9+ 7"!3+!" 9+8+
@"' 8 2 +8 9+ !8 "2!3 " ! 8 ++8 B+
5 "7+!Q; $>=P 2 B 2-"! 6" " 8 >' B 8 +! 24
B+B 7+!8 @+!+ .!23 2 +8 " 24+ 2 5"44+.+
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9 8 "!6 " +4" 9+ 592! +!' @28 211!"D+3
+7! 2!6 Q $>=& 9+ 1!+8+ "2!3 "
! 8 ++8 928 ;# B+B 7+!8 8+!D .' ; 6+2!8
3 D 3+3 "' ; +R 24 54288+8 " +' " @9 59
!+ !+8 +259 6+2! 9+ 8 55+88"!8 7+ .' +4+5 +3
76 9+ !+B2 .' ! 8 ++8 9+ 24 B "B C
2 +' $ B+B 7+!' 2 2446 9+ !8 54288 "
=' 8 3+ 8 7+.2 @"!A "D+B 7+!' =' $>=0
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" 24 9 !59 9+ 5"44+.+ 923 " 46 2 54288 524
5" !8+ 4 $>0=' @9+ 2 19 4"8"19 524 5" !8+
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+9"8+ 5"44+5 " "1+ +3 "' 9+ 1 74 5 "! 9+
!8 B+ $<#> !2 +! +8 92D+ 7++ +8 27C
4 89+3 28 "44"@80 + 2 9+ 2 9 2112
8 2 3 .B2 9 9+ 3+.!++8 . D+ 2!+
2 3 "! !+8 3+ .!23 2 + 8 36
F 9+ 3+!.!23 2 + 5" !8+ " =' 6+2!8
B26 248"' 7+ 5" B14+ +3 ;' "! ;' 6+2!8
+4" "44+.+ 8 " +' " 9+ 8 " 8 " 9+
"! . 24 4 8 " 9"8+ 255+1 +3 76 9+ 2! +. +
" 32 " "! 9+ 3D2 5+B+ " " +259C
.' #:" "& 28 12! 5 12 .' 8 868 +B " "
!+ ! .' 244"@2 5+8 "' 1!" +88"!8 9+ 7 43C
.8 .!" 38 2 3 +R 1B+ 2!+ D24 +3
M:2 $' $<#<G 2 dP<Q P### !+24 +8 2 + 9+43
+4" 9 52." 2 3 +48+@9+!+ 2 d$= >QP
9+ " 24 1!"3 5 D+ + 3"@B+ 8 d$ #&& &&0
9+ 2D+!2.+ 8242!6 " 2 1!" +88"!' 8 d$&##
9+ =; B+B 7+!8 " 9+ 8 ! 5 .' 8 2 $&
2!+ 44 1!" +88"!8 9+!+ 2!+ ;>& 3+!.!23C
2 + 2 3 P .!23 2 + 8 3+ 8 3@2!3
@ .9 2 " 8 1!+8 3+
(2(

M$=0#E$P=OG ?' "!
4"!+ 5+ 9+ 8" " 2 "74+B2 9+ !+5+ D+3
9 8 +3 +2 " 9 8 2 D+ "@ +' 42 +!
8 3 +3 !++A 2 +88 2 2 3 19 4"8"196 3+!
"B1" 2I! 2 23 2 $=<> 9+ -" +3 9 8
2 9+!' 2 9+ 5" ! " " +!!2!2 @9+!+ 76 9 8
1"4 89+3 B2 +!8 2 3 .!25+ 4 @ 9+ 8""
7+52B+ " 5+3 +!+ 9+ B+ 5!+I 2 "!. 2
"' @9"B 9+ 3+3 52 +3 2 3 24". + 9+ D+!C
25 42!" 42 " 5 4"D+ #7 &" +!'
4 D .' "!8"B+ B+ 2 9+ " ! 2 ! 7 "' 9+
@+ "' "B+ PQ 2 3 @28 211" +3 " +
" 9+ 8+5!+ 2! +8 "' "1+ +"' % 8 5"4C
4+2. + " 5+ @28 23"4+ "' M. "G $PQ#
9+!+ !+3 "' 23 2 @9+!+ 9+ 4 D+3 "!' 6+2!8
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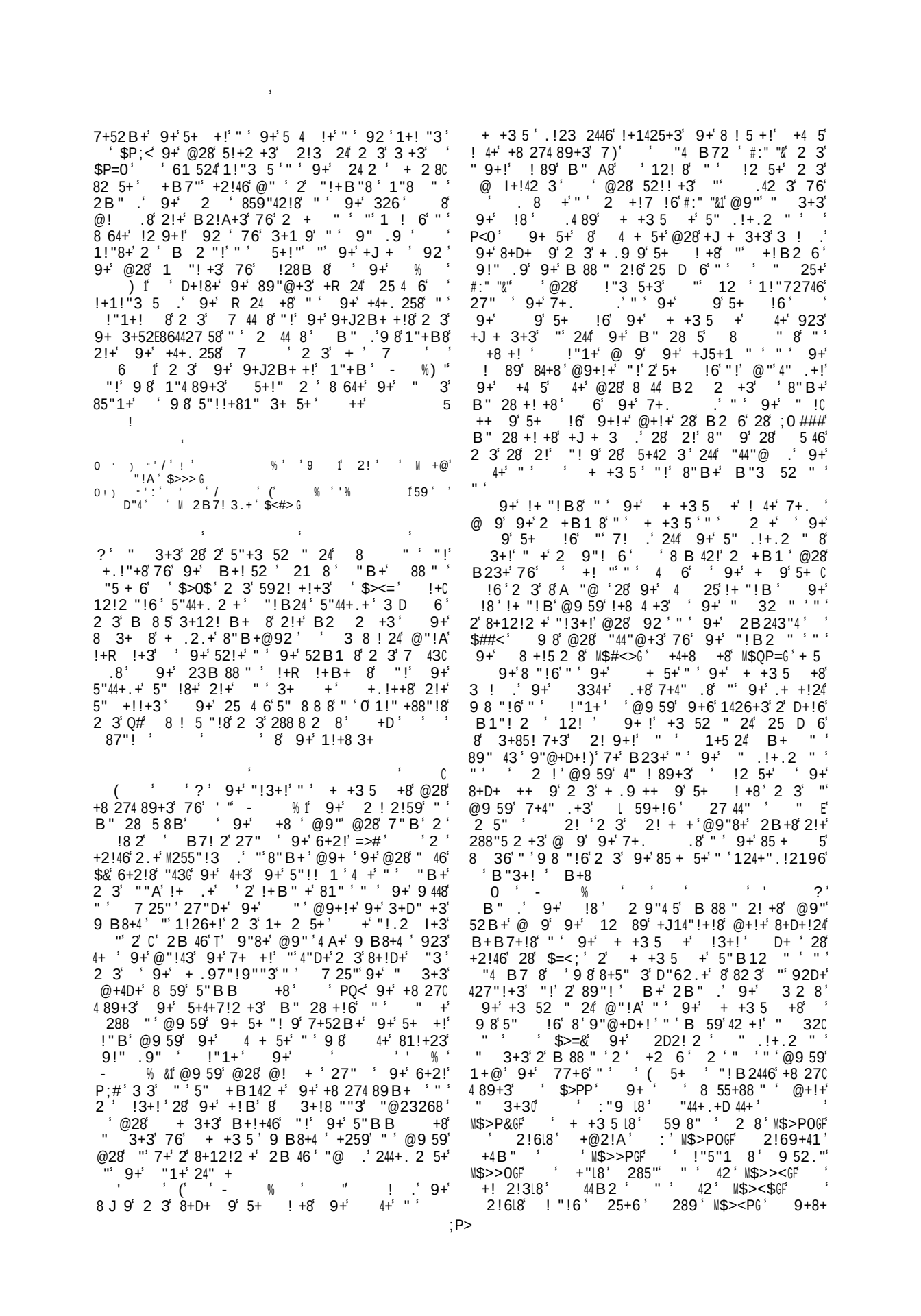

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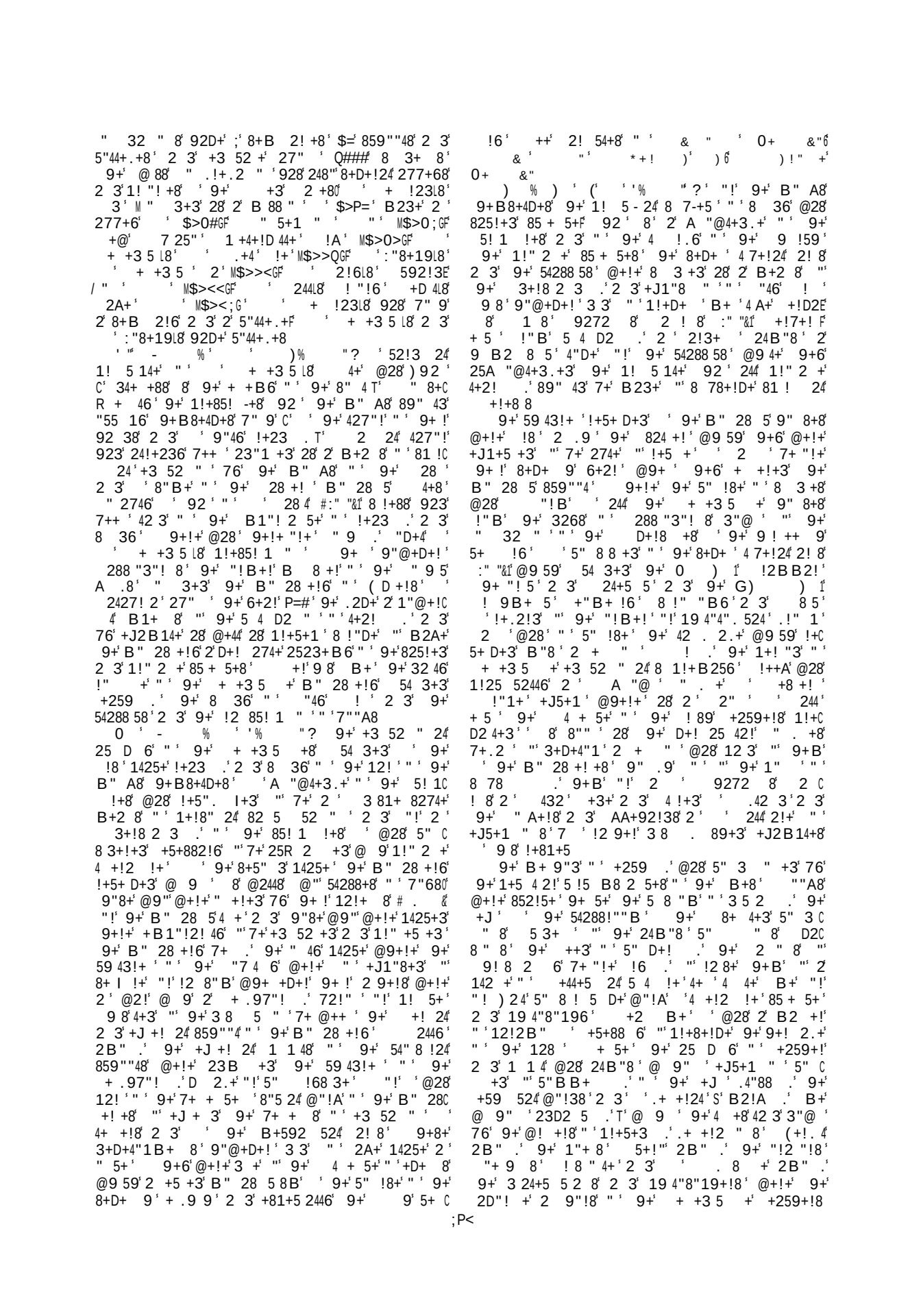

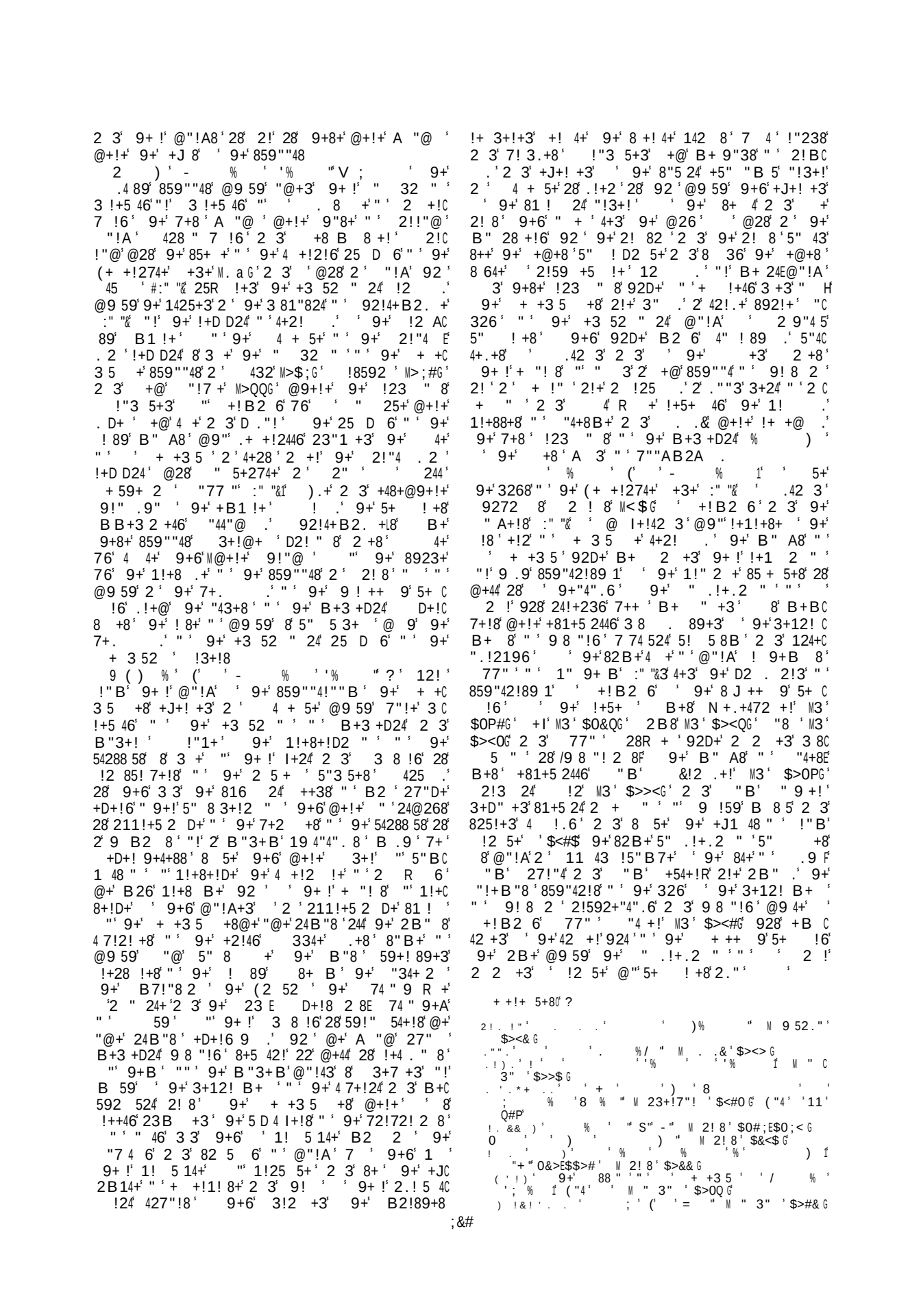

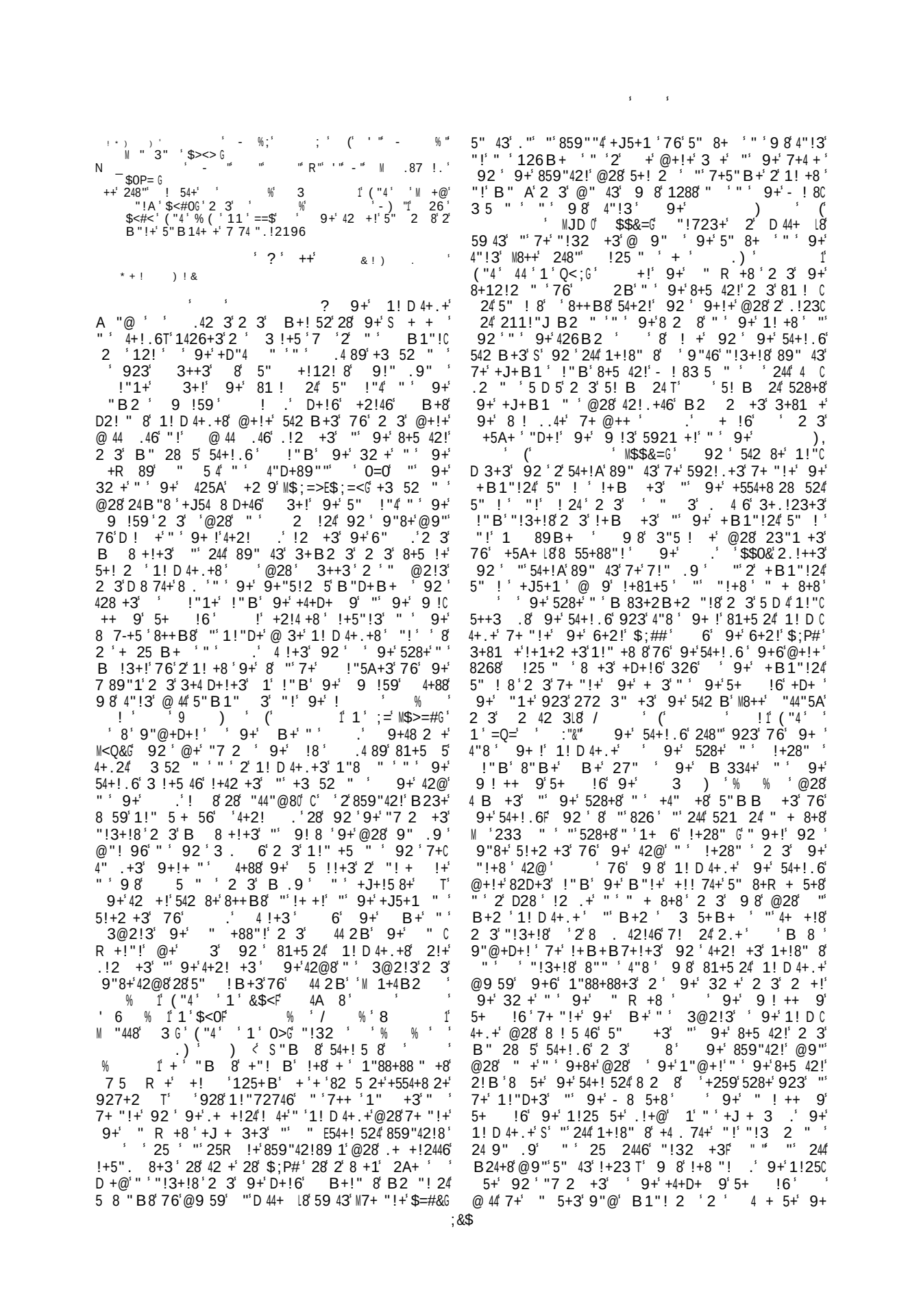

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++ 9' 5+ !6' '+3 52 " ' 92 ' 8'3 ! .'
9+' D+!6' 1+! "3' @9+ ' 8 B 4 8' "' +3 52 " 24'
B"D+B+ 8' @28' B"8 ' ++3+3 ' 9+' D+!6' 25 '
" ' 1"88+88 .' 2' B"3+!2 +' 2B" ' " ' 4+2! .'
@28' "!'2'4" .'1+! "3'8 5 + ' "' !+B"D+'2'B2 '
24 ".+ 9+!' !"B' 2' - ! 83 5 " ' 92 ' @28' +!C
B + '2 3' 3 42 "!6'2 3' "' 7! .'9 B' @ 9 '2'
- ! 83 5 " ' 92 ' @28 ' 2 ' 2 6' !2 +' B+!5 4' '
9+' .!+2 ' B2-"! 6' " ' 528+8 ' D+ ' @9+ ' 9+'
1! D 4+.+' @28' !+8 ! 5 +3' "' +4" 6' 9+'8 33+ '+JC
+ 8 " ' " ' ' "' 9+'42 6' .2D+' '2' +@'8 B 4 8'
'@28' "@' @"! 9' @9 4+' "' 4+2! ' "' !+23' B+!+46'
"' +8521+' B"! 24'!+81" 8 7 4 +8' "!' " + 8+8' 92 '
'@28' " ' 24@268' 1"88 74+' "' 2D" 3 ' +' B 26'
3++3' 7+4 +D+' 92 ' 4' 9+' B 334+' " ' 9+'
++ 9' 5+ !6' 9+') '% % '@28' 2'
D24 274+' 4 + 5+' ' 2 " 24' +3 52 " ' '
923' " ' 6+ ' 7+5"B+' 2' "!B24 6F ' @28' " '
8 5 + ' "' A "@' 76' 9+2!' 9+' S' +5AED+!8+'D'
M 824B' ' (' $G ' "!3+!' "' 82D+'6" !' +5A ' '
B2 ' 8' "' 14+23' 9 8'1! D 4+.+' 9+' B 8 '5+! 2 46'7+'
2'859"42!' ' 9+' 8' " '2'1! +8 ' !" +88"!' + 6'
" ' 2B7! 3.+' D+!8 6' . D+8' 8')
(' ' !'1 ' =>#' ' ;G'2 ' 8 2 5+' " '
B"3+! ' B+8' 92 '!+2446'!+1!+8+ 8' 9+'2 3+'
" ' 9+' " ! ++ 9' 5+ !6' ' 9+' B2 +!' +'
8268'0' S 6'2'8 . 42!'5" 5 3+ 5+'+D+ ' 9+' !278'
" ' B"3+! ' 4.+! 2'92D+'!+5". !+3'4+2! .'28'2'
.!" 3' " ' 5! B 24' B B 6' 73' +4' 23!'
82 30' S / "!+' 92 ' " 5+' ' 92D+' !+B +3'
8+ + 5+' " ' 3+2 9' " ' 2' 5! B 24' !"B' 9+' B+!+'
25 ' " ' 9 8' 7+ .' 2' 859"42!' ' !+R !+8' 8"' 4" .'
2' B+' ' 4.+! 2' "' 7+5"B+' @+44' 8 ! 5 +3'
92 ' '923' " ' 9+'5" !2.+' "' 3+8 !"6' '" +'326'
9+' ! '" '6+2!8' " '427"! " 8'8 36 L'>' M 9 !59E
9 44L8' (' (' ' ' 8 1' 1 ' $=P G' 9' 9+'
5"B .' " ' 9+' + 2 882 5+' :" "& 9+' 1! D 4+.+'
7+52B+' 2' 8"5 24' 32 .+!' 9+' +4+B+ 8' " '
4+2! .' @+!+' 2 ' 428 ' B"!+' @ 3+46' 81!+23' 2 3'
9+' 5! B 24' 54288+8' " 3' 89+4 +!' '2' 1! D 4+.+'
+ 3+3' "!' 2' 9"46' "!' 4+2! +3' 54288' 6' 2'
8 2 +' " ' $=>>E$=><'M='2 3'P' + !6' (' 5 ' $;G'
9+' 426B2 ' 5" 43' 542 B' 9+' 1! D 4+.+' " 46'
" 5+'2 3 ' "!3+!' "' 1!+D+ ' 2 ' 27 8+' " ' 9+'
1! D 4+.+' 9+'426B2 '542 B .' '@28'7!2 3+3' " '
9+' 7!2@ ' " ' 9+' 4+ ' 9 B7' @ 9' 2 ' S' 'LL'
"!' B !3+!+!' "!' S T' "!' 2 6' " 9+!' +4" 6 '
S' D+!8'1+!8" 8'4+2! +3T'@+!+' 9 8'3 85" !2.+3'
!"B' 9+' S 1!+8 B1 " 8' 7"43 +88T' " ' 5"B C
B .' 5! B+' S' 1" ' ! 8 ' " ' 9+' 1! D 4+.+' " '
9+' 9 !59 T' ' $P;$E$P;Q' MQ;' + !6' ('
5 ' $G' 9+' 1! D 4+.+' @28' 29+ ' 76'8 2 +' !"B' 244'
1+!8" 8' " ' ' "!3+!8' "!' 3+!' 9+' "!3+!' " ' 8 7C
3+25" '2 3' 9 8' " 5+' B"!+' 9+'4+2! +3'426B2 '
@28' +J54 3+3' !"B' + + ' " ' 4+!.6
9+'!+B2 3+!' " ' 9+'9 8 "!6' " ' 9+' 1! D 4+.+'
8' 8 ! 5 46' 9B +3' "' 5! B 24'42@' 9+' + + '
@28' !+D D+3' 1!+8 B2746' "!' 9+' 1 1"8+' " '
B .2 .'2'5! B 24'42@' " '.!+2 '8+D+! 6' '
$P;Q' MQ;' + !6' (' 5 ' $G' 9+' 1! D 4+.+' @28'
!+B "D+3' ' 528+8' " ' 3+4 7+!2 +' B !3+!' '
4 I27+ 9L8' !+ . ' 9+'81 ! 24'5" ! 8'@+!+'" 8 +3'
24 ".+ 9+!' 2 3' 9+' 1! D 4+.+' . D+ ' "' 244' 1+!C
8" 8' @9"' 5" 43' !+23' "' 542 B' ' 9"@+D+!
D"4D+3' " +' 6+2!' ' -2 4' ' 9+' !+ . ' " '
44 2B' ' '@28' +J + 3+3' "' @"B+ '4 +!2 +'
2 3' 44 +!2 +'M@+' B 8 '!+B+B7+!' 92 ' 8'2 3'
1+!9218' " 9+!' @"B+ ' @9"' 5" 43' !+23' 923' 9+'
1! D 4+.+' ' 9+' 334+' .+8G' ' 9+' !+ . ' " '
+' 44 +!2 +' B+ ' @+!+' 244"@+3' "' 542 B'
9+'1! D 4+.+'7 '2 ' 9+'82B+' B+' 9+'1!25 5+'
.!+@'" '+J54 3 .'B2 6' +4" +8' !"B' 9+' + +
' 9+'+ 3' " ' 9+'+ .9 ++ 9'5+ !6' 9+!+'@+!+'
$&# +4" +8' @ 9" ' + + ' " ' 4+!.6' 9+'
1! D 4+.+' @28' 27"989+3' ' .42 3' ' $>QO'
MO'2 3'> +" ' (' 5 'Q>G' 2 3' ' !+42 3' ' $>Q>'
+'9 3!+3'6+2!8'2 +!'@+' !8 ' 9+21' " '
' B 8 ' 2446' 7+' " 5+3' 92 ' 9+' 1! D 4+.+'
"E326' 8' " ' 278"4 +46' 3+23 ' ' 1288+3' @ 9'
9+' .4 89'5"B B" '42@' "' B+! 52 '2 3' B+! C
52 '42@'7""A8' B+ " '528+8' '@9 59' + + ' " '
4+!.6'@28' 14+23+3' '@28' 27"4 89+3' 76'8 2 C
+' ' 288259 8+ 8' '$0>=' ' 9+'8 2 +8' " '
3 2 2' 2 3' +8" 2' 9+'5" ! 8' ' B"!+' !+C
5+ ' B+8' 92D+' !+-+5 +3' 9+' 3"5 ! +' ' '
2112!+ 46'8 44'8 !D D+8' ' "! 9' 2!"4 2' 2 3'
" 9' 2!" 2' ' 9+' "!B+!'8 2 +' 9+'1! D C
4+.+' @28' 5" 5+3+3' "' @"B+ ' 9+' 5" ! ' 3+C
542! .' 92 ' S' "' !+28" ' 52 ' 2 ' 9 8' 326' +J 8 '
@96' +B 24+8' 8924' " ' 7+' 4+3' "' 9+' + + '
" ' 4+!.6' 28' @+44' 28' B 24+8 T' M ++ 9+' 528+' " '
9+' ' '" 7 1' $!19+6' $=0' : ' ' 89"1/8'
!' ' !'1 0 9' +3 ' $><Q' ("4' '8+5'
<;>' 1' P&=G' ' 9+' 82B+' 8 2 +' S ' @" 43'
8++B' 92 ' 9+'8 2 "!6'12!3" '@9 59' 8'2 ' 5 C
3+ ' "' 9+' + + ' " ' 4+!.6' 3"+8' " ' 2A+'
+ +5 ' 4' 9+'12! 6' 8' 7 ! +3' ' 9+'92 3' 2 3'
3+4 D+!+3' " ' " ' 1! 8" T' ' 9+' !+5"!3' 255 C
3+ 2446' "B 8' "' 8+ ' " '8 59' +J+5 " ' " ' 9+'
8+ + 5+' ' B 26' 7+' 89"@ ' 76' 2' @ +88'
8 ' " 7 ! 1' &' :" +8' ' ;<> G' ++' " '
9+'1!25 5+' " ' "! 9' 2 3' " 9' 2!"4 2' 9+'
528+8' " ' 9+' ' " - 'M>' 59 ' QO&G' 2 3' 9+'
' " ') % (('M=' !"7';0QG' 'B 26'1"88 746'
+J 8 ' 8"B+' " 9+!' 8 2 +8' 7 ' ' 928' .+ +!2446'
7++ '27"989+3' 76'8 2 +' ! + 6'8 ..+8 8'
92 ' 9+'8 !D D2' ' 9+' 2!"4 28' S' 8' 1+!9218'
5" +5 +3' @ 9' 9+' +3 52 " 24' . 4' 7+ @++ '
9+'@9 +'2 3' 9+'5"4"!+3'5! B 24 T' '8"' 9+'
1! D 4+.+'" ' + + ' " ' 4+!.6'928'2 '+3 52 " 24'
B+2 .' "E326' 2' 9" 82 3' 6+2!8' 2 +!' 8'
!8 ' D+ " ' :' ^ ' ' '

0 ' ' 'M$0<>E'
$>P=G' ?' ' +!B2 '19 4"8"19+!'2 3'+3 52 " 24'
9+"! 8 ' +' @28' 7"! ' ' +! '2 3' 2 + 3+3'
9+' ! +3! 59E +!3+!' 6B 28 B' @9 59' @28'
9+ ' 3+!' 9+' 3 !+5 " ' " ' 9+' +J5+44+ '1+32C
."." +' +! 92!3' !23 2 .'2' 9+' +2!46'2.+'
" ' ++ ' 9+' + 98 +3' ' 9+' +!B2 ' @2!' " '
4 7+!2 " ' 2 +!' @9 59' 9+' 8 3 +3' 9+"4".6'
!8 ' 2 ' 244+' 9+ ' M$>$0G' ' +!4 ' 9+!+'
9+' 52B+' 3+!' 9+' 4 + 5+' " ' 594+ +!B259+!'
2 3' 92D .' ! +3' 9 8' 2 + " ' !"B' 9+"4C
".6' "' 19 4"8"196' 7+.2 ' "' 4+5 !+' ' $>Q#'
@"' 6+2!8' 42 +!' 9 8' 4+5 !+8' @+!+' 8 "11+3' 76'
9+' "!3+!' " ' 9+' ."D+! B+ F 9 8' @28' 1!'72746'
3 +' "' 9+' 4 + 5+' " ' +.+4' @9"8+' S 278"4 +T'
19 4"8"196' + +A+' "11"8+3' "!' 9!++' 6+2!8

9+ " 3 2 !+ .+ " .+ 7 2 4+) 9 9+ @28 244"@+3 "! !+8 B+ 9 8 4+5 !+8 +!4 $>;Q 2 +! +.+4L8 3+2 9 9+ @28 2446 211" +3 288 8 2 1!" +88"! 7 "! 4 + 6+2!8 42 +! 3 3 9+ !+5+ D+ 9+ B+2.+! 8242!6 " Q## 924+!8 2!59 $>P=@9+ "!8"B+ B+ " 255" "! 8+D+!+ B+ 24 8 !2 9 8 9+24 9 923 7++ 1D .@26 9+ 3 8211+2!+3 !"B 9"B+ 2 3 @28 9" .9 5"B B +3 8 5 3+ + +A+L8 B"8 B1"! 2 @"!A ! "B 2 1+32.". 524 1" " D +@ 8 9 8 4)) % 0 ( )% 9)% 1 X D"48 +!4 $>;PE$>;&G 8 1+32.".6 9"@+D+! 28 @+44 28 9 8 + 9 58 4". 5 2 3 B+ 21968 58 8 " 3+3 " 9 8 18659"4".6 @9 59 8 !+2 +3 9 8 .)% $ %) % (0 6 . ;' ($ %) '% % 1 $>;;G + +A+L8 19 4"8"196 2A+8 8 8 2! .1" +! 24 8+ 8+ 1+!5+1 " @9 59 9+ 5" 8 3+!8 9+ 8" !5+ " 244 A "@4+3.+ 55"!3 .! "9 B 9+ B 3 8 2 5" 5!+ + 18659"4". 524 "!.2 8B 2 868 +B " 1! B D+ B B2 +! 24 "!5+8 @9 59 2!+ 52127 4+ " 3+D+4"1B+ 3+!9+ 8 B C 42 " " 9+ " 8 3+ @"!43 9+8+ 1! B D+ "!5+8 ! & 3 +! 28 "+ 25 6 + +!.6 2 3 !+5+1 D 6 9+ 18659 524 1!"3C 5 8 52 8+3 76 9+ 25 " " +J +! 24 8 B 4 " 9+ 1! B D+ "!5+8 1+!8 8 5" 85 " 8 +88 28 S !25+8T ') &! @9 59 76 9+ ! B2 C "43 5"B7 2 " 8 .!" 18 2 3 8+! +8 5" 8 + 9+ B+ 24 4 + " 9+ 3 D 3 24 9+ 8"E5244+3 25 4 +8" 9+"43+!18659"4".6 8 59 28 B+B"!6 B2. 2 " + 5 + +A+ A+ +!72! 5" C 8 3+!+3 28 B+!+ 278 !25 " 8 +B"!6 "! 8 2 5+ 928 "! +24 +J 8 + 5+ 28 2 25 4 6 212! !"B 5" 5+1 8 7 8 8 B 146 9+ 32 B+ 24 R 24 6 " + 25 6 9+!+ 9+ 1! B D+ "!5+8 " 9+ 8" 4 9 8 9+ "43 3+2 " S "!C B24 3 85 14 +T @28 89"@ " 7+ " 4" .+! + 274+

9+ .+ + 5 592!25 +!" + +A+L8 18659"4".6 B23+ 8 868 +B +81+5 2446 2114 5274+ "1+32C .".6 2 3 8 9+!+ "!+ " 8 !1! 8 .! 3 92 9 8 4 + 5+" +!B2 +259+!8 8 !2 A+3 8+5" 3" 46 " 92 " +!72! 9 8 +8 +!E @+. 9+ "!+B"8 ! 88 2 +3 52 "!" 9+ 428 5+ !6 28 @+44 28 +8 @9" 28 3 !+5 "!" 9+ (+ 2 C 2+32.". B T 3 3 2 .!+2 @"!A "!+3 52 " 8 ! 2 @+!+7" 9 2!3+ 23B !+!8 2 3 @"!A8 54 3+ 7+8 3+8 9"8+ B+ C " +3 27"D+C ( ) 7) (88+ 8 M % $ % 2) (' 8 ! 1 +! $>Q#G 7)) % ; % $ % $ % (') ' ('$ % % $ 1 U D"48 $>;OE$>=$G @9 59 9+ 2 9"!5" 8 3+!+3 28 9 8 B"8 8 55+88C 4 @"!A 7)) 4) $; 2) ! $ %' (1 $>>QG $ % % ' ; 44 $ % % ' ; % 1 Q D"48 $>;;G 7) 2) (% 1 $>;&G

' ;) ; X "# $>=QG 2 3 $ % $ % 1)) (. $ % *+ Q D"48 $>P#G

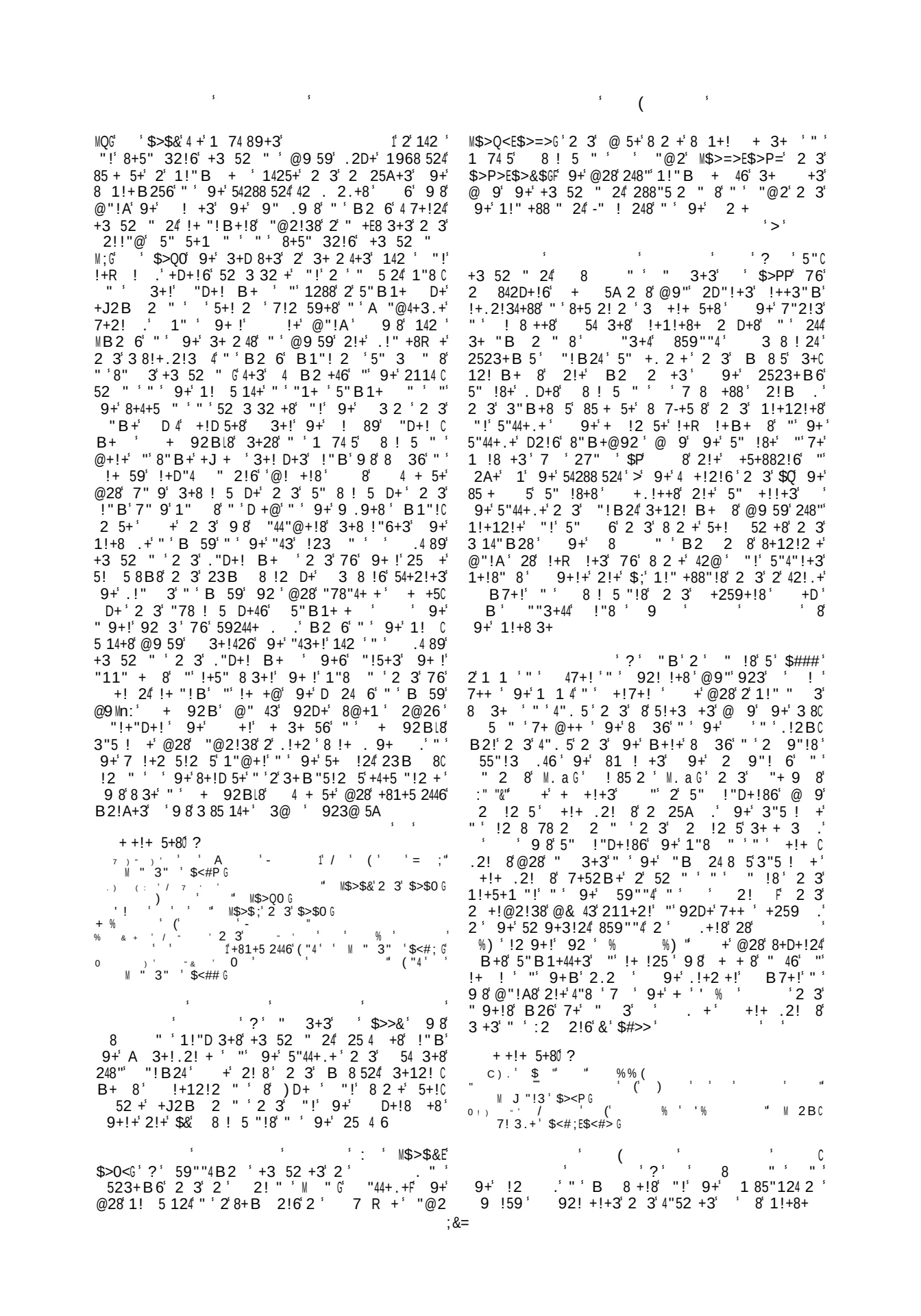
+ +!+ 5+8C ?

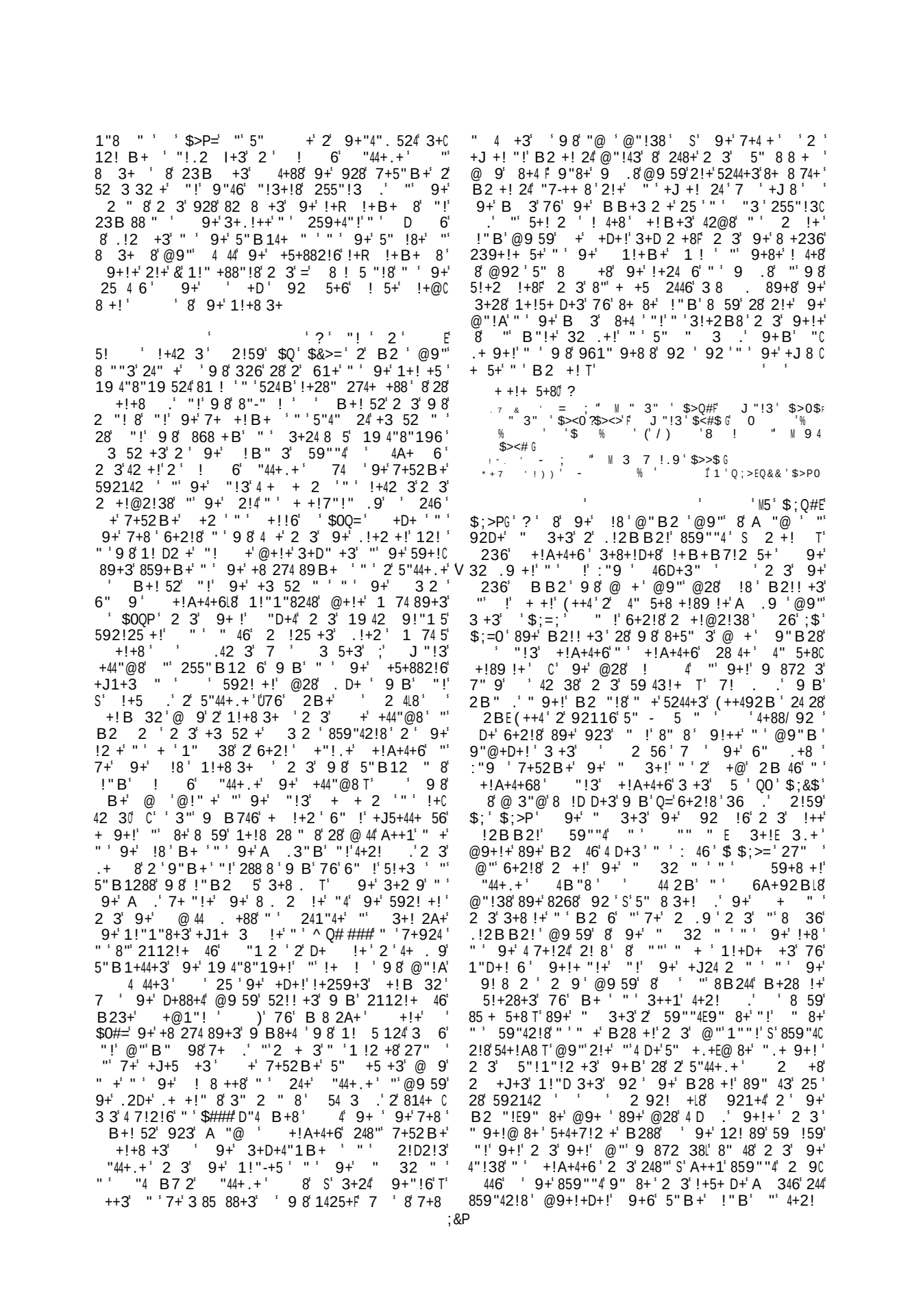
! & ( ) ' + % ('$ '$ % '5" C 2 8 2 44 7 74 ".!2196 ("4 44 1 $ 1 $$&' !) ' - ; / '$ 1 +@ "!A $><P * ' & ' + % - ; % + ; ; / . "# M$>>P G % ! * ' ' + "# 2"# "# - ;) ' M 2 I $>O& G

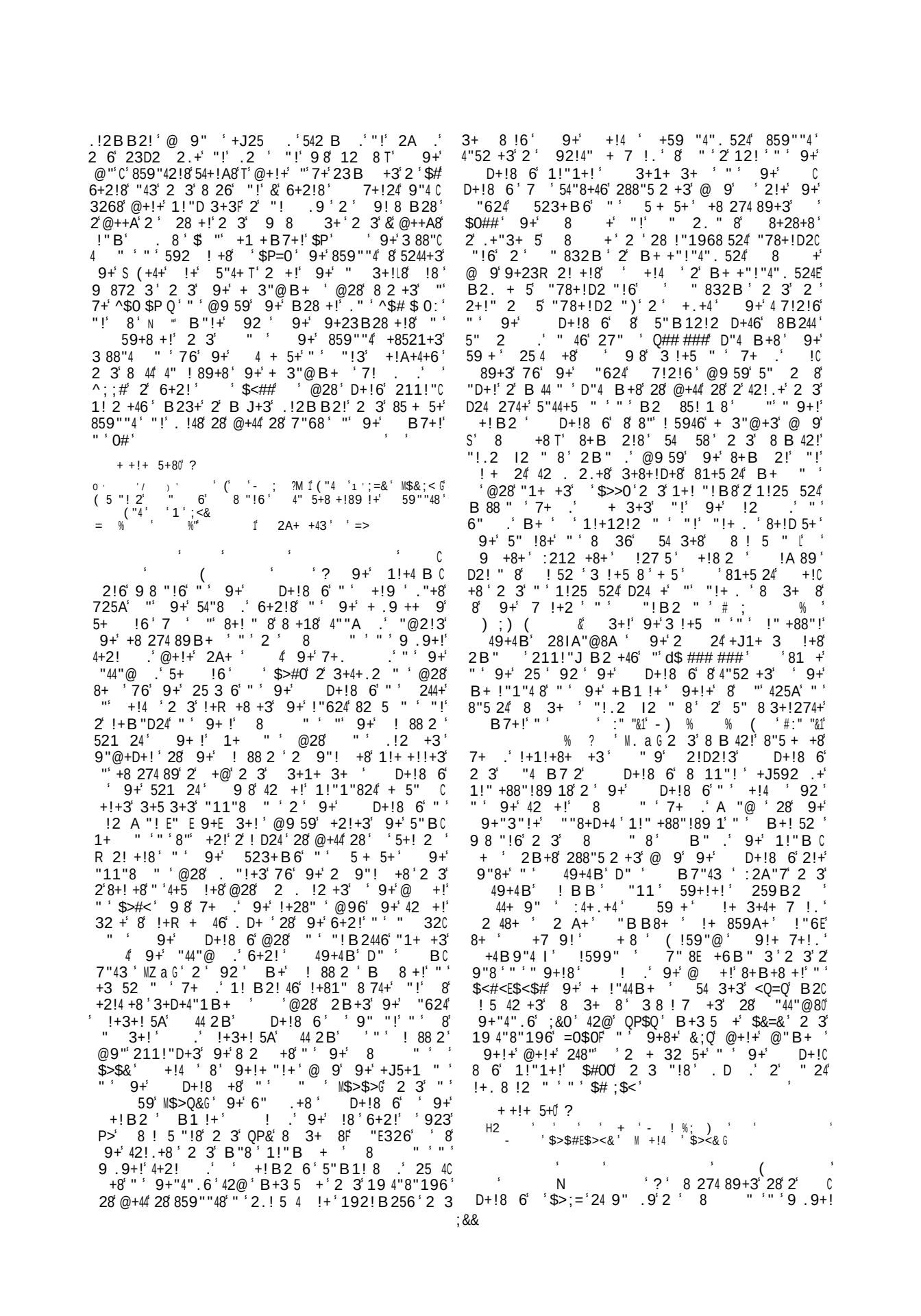
? 8 " " 3+3 $>0;' 3+!' 9+ 2 81 5+8 " 9+ !++3B 2 L8 3 "5 + 6 " 9+ + 9"3 8 1 85"124 9 !59 2 3 8 11"! +3 76 92 8"5 + 6 2 3 9+ "! 9 2!"4 2 24 " +!+ 5+ "! 9+ +3 52 " " +.!"7"68 2 3 . !48 1 48 B26 + +!' !"B 9+ 1 74 5 859""48 ! B2!6 1!+12!2 "!6 5"44+. 2 + "!B24 2 3 B 8 5 3+12! B+ 8 2!+ B2 2 +3 9+ B2-"! 6 " 9+ 1 1 48 2!+ 9+ 1! B2!6 2 3 1!+12!2 "!6 3+12! B+ 8 +.!++8 2!+ 5" +!!+3 9+!+ 8 2 25 4 6 " $Q 8 ! 5 "!8 428 +!4+! 8 9+ 1!+8 3+

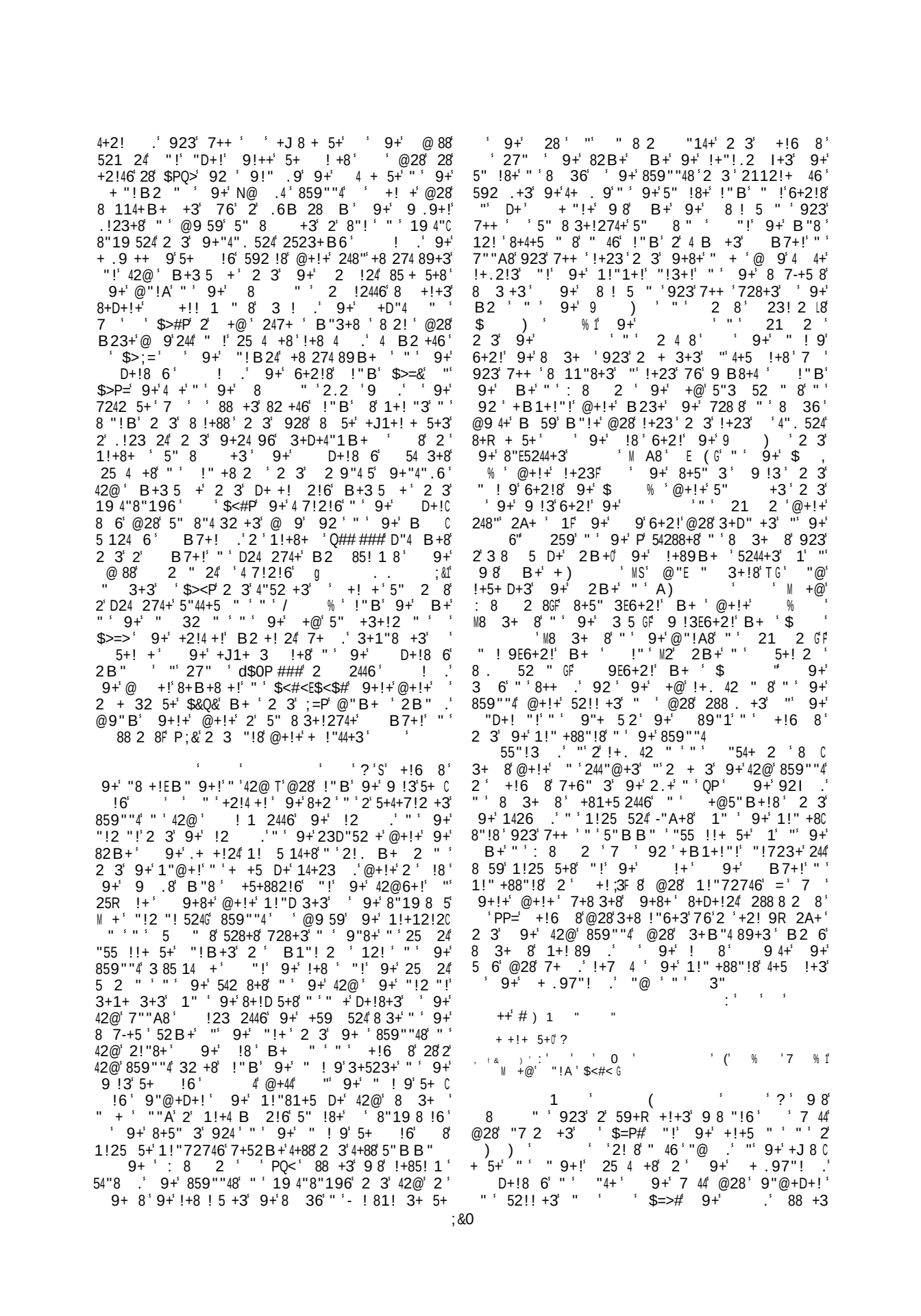
E ? +! !& , 7 0+ &"

: M$0=>E$>;QG ? 7E 5 8 4 2! 2 19 4"8"19+!' 2 3 !+ "!B+!' " .4 89 42@ 2 3 +3 52 " 24 23B 8 !2 " F 8" " 2 @+24 96 " 3" 2 "! +6F 2 1!+5"5 " 8 59 43F +3 52 +3 2 +8 B 8 +!' 2 3 ++ L8 "44+.+ J "!3F 5244+3 "! 9+ 2!' 2 5 "4 L8 $>$0F 3+D" +3 B8+4 "! 9+ 85 + 5 8 36 " - ! 81! 3+ 5+F 1 74 89+3 $00&' 2 " 6B" 846 9 8 2 7 3 2 2 25A " 9+ 1" " D +@" " !' 44 2B 425A8 " +@9"8+ 4+5 !+8 9+ 923 2 + 3+3 2 9+ D+!8 6 " J "!3 9+ 1 74 52 " " 9 8 @"!A 4+3 " 9 8 B 256 @ 9 "!3 9+47 ! +@9 59 !"C 3 5+3 9 B " 5 !54+8 " 4 + 5+ 2 3 !2 8+3 9 B !"B 2 3+1!+88 .' ++4 .' " B1" + 5+ 2 3 9 B 4 2 " $0>< 9+ 1 74 89+3 9 8 9)% 1 @9 59 9+ +J1" 3+3 9+ 1! C 5 14+" 4 6 8 7+2! .8 1" 5" 3 5 2 3 1 74 5 42@ +' 3 8 . 89+3 9 B8+4 28 2 !+ "!B+!' " 1! 8" 3 85 14 +' 2 3 28 2 25 +' 5! 5 " " "78"4+ +' 5 " 8 2 3 +!!" +" 8 186C 59"4". 524 1!+8 11"8 " 8 .4 89 42@ 3 !+5 46 9!" .9 9+ 427"!8 " 9 8 "44"@+!8 2B" .' @9"B 89" 43 7+ B+ " +3 :"9 44 :" "& 2 3 !2 5 8 425+ MZ a G 9+ 923 2 1+ + !2 C .' 4 + 5+ 1" .4 89 1"4 58 2 3 1" 9+ 81 ! " .4 89 8"5 24 4+. 842 " 54 3 .' 92 @9 59 3+24 @ 9 +3 52 " 24 R +8 " 8 C !+5 46 9+ 9+41+3 259 +D .' 9!++ +3 52 " 24 592 .+8 " .!+2 B1"! 2 5+ .4 89 9 8 "!6F M$G +' 4+3 9+ "11"8 " "! +4 . " 8 +8 8 2 9+ "43+!' D+!8 +8 76 2 12B194+ ' ! 1 1! +3 $>$;' 1 74 89+3 $>$0









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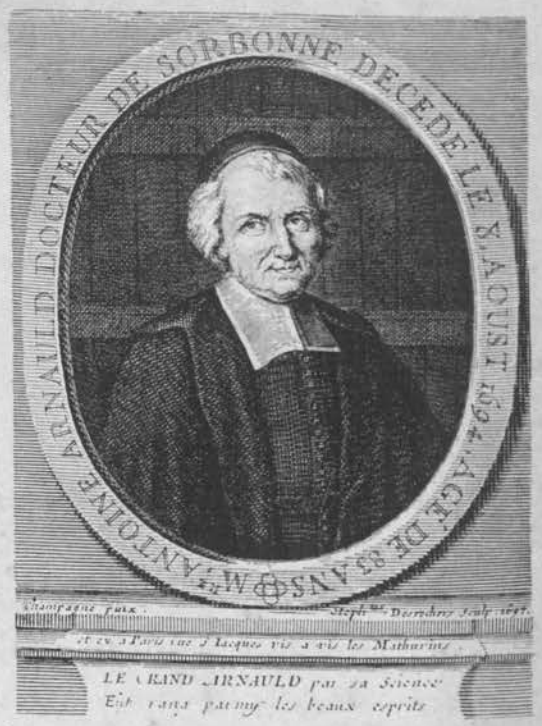
Thomas Aquinas (*c.* 1225–1274). (See p. 162.)

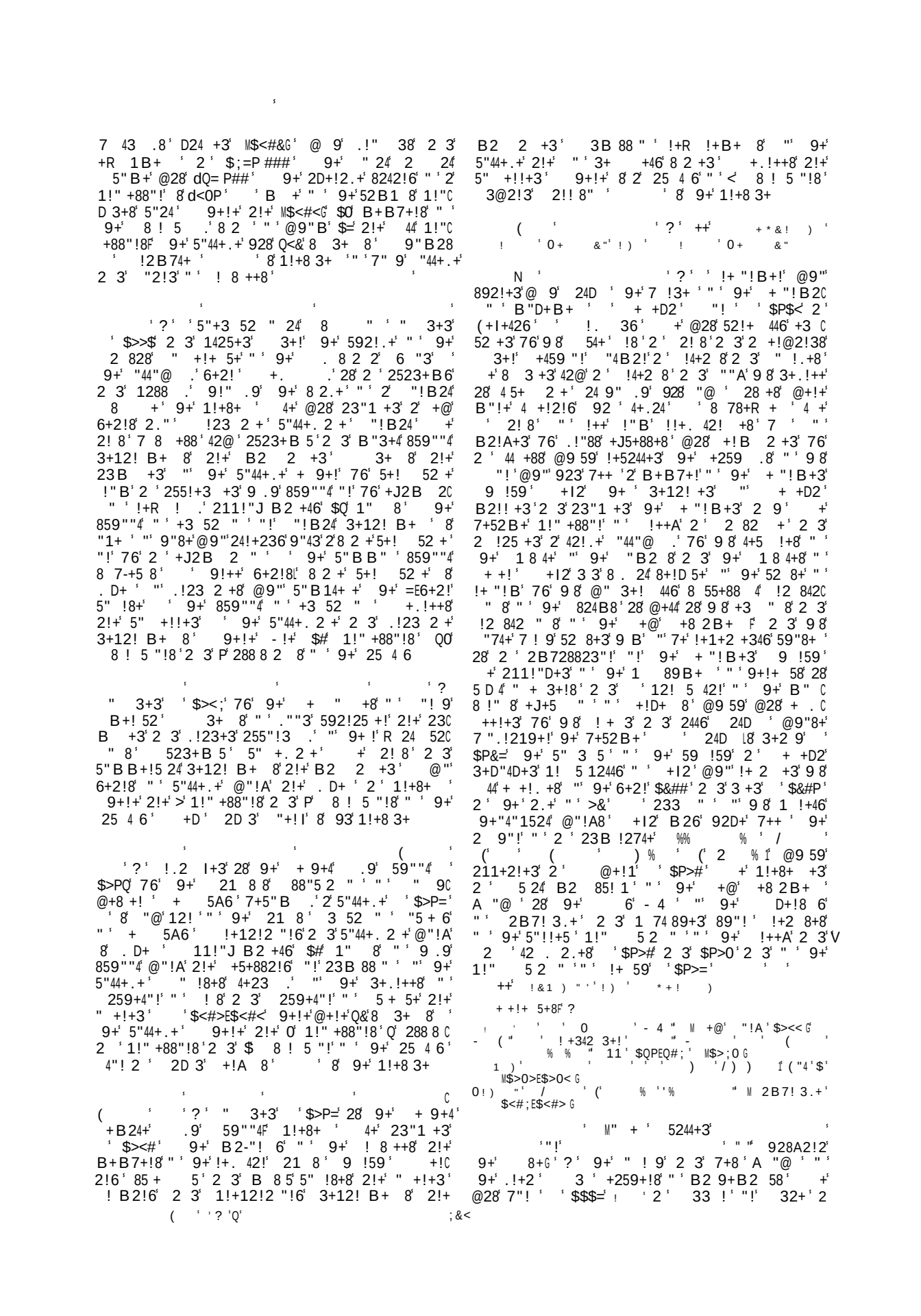

ANTOINE ARNAULD DOCTEUR DE SORBONNE DECEDE LE 8 AOUST 1694 AGE DE 82 ANS
LE GRAND ARNAULD par sa Science
Eût rang parmy les beaux esprits

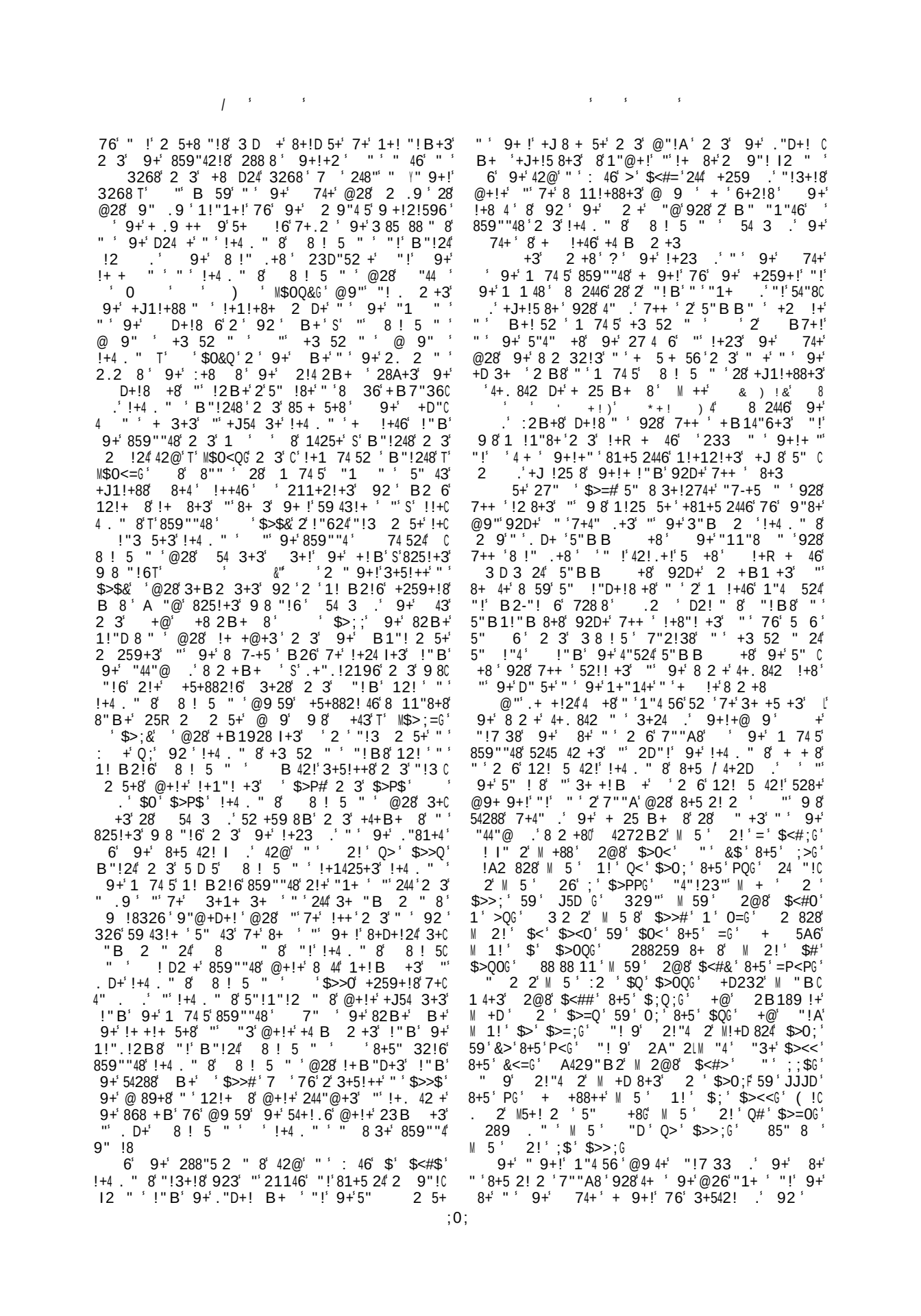
Antoine Arnauld (1612–1694). (See p. 218.)

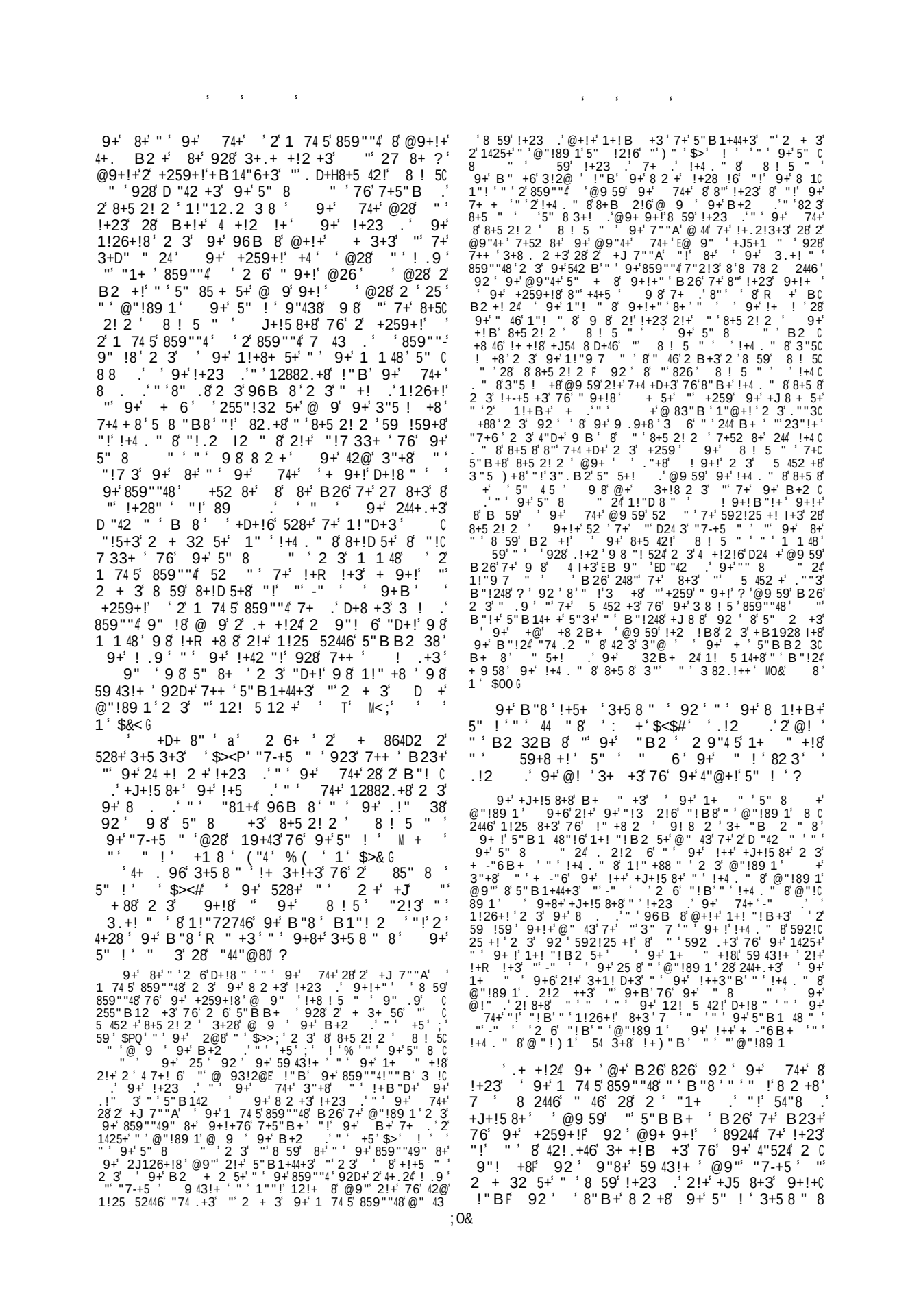
Theodore Beza (1519–1605). (See p. 369.)

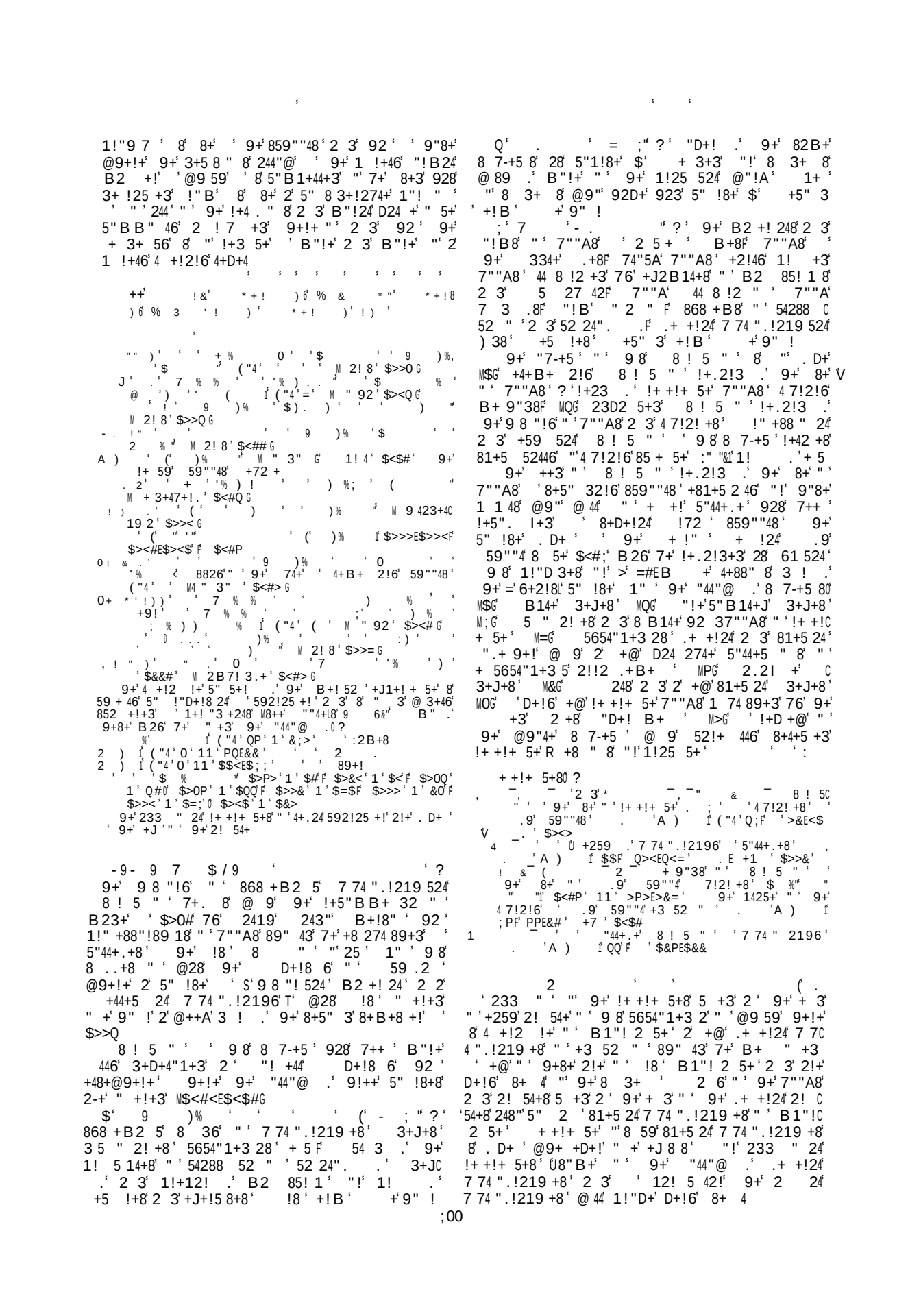
Thomas Campanella (1568–1639). (See p. 512.)

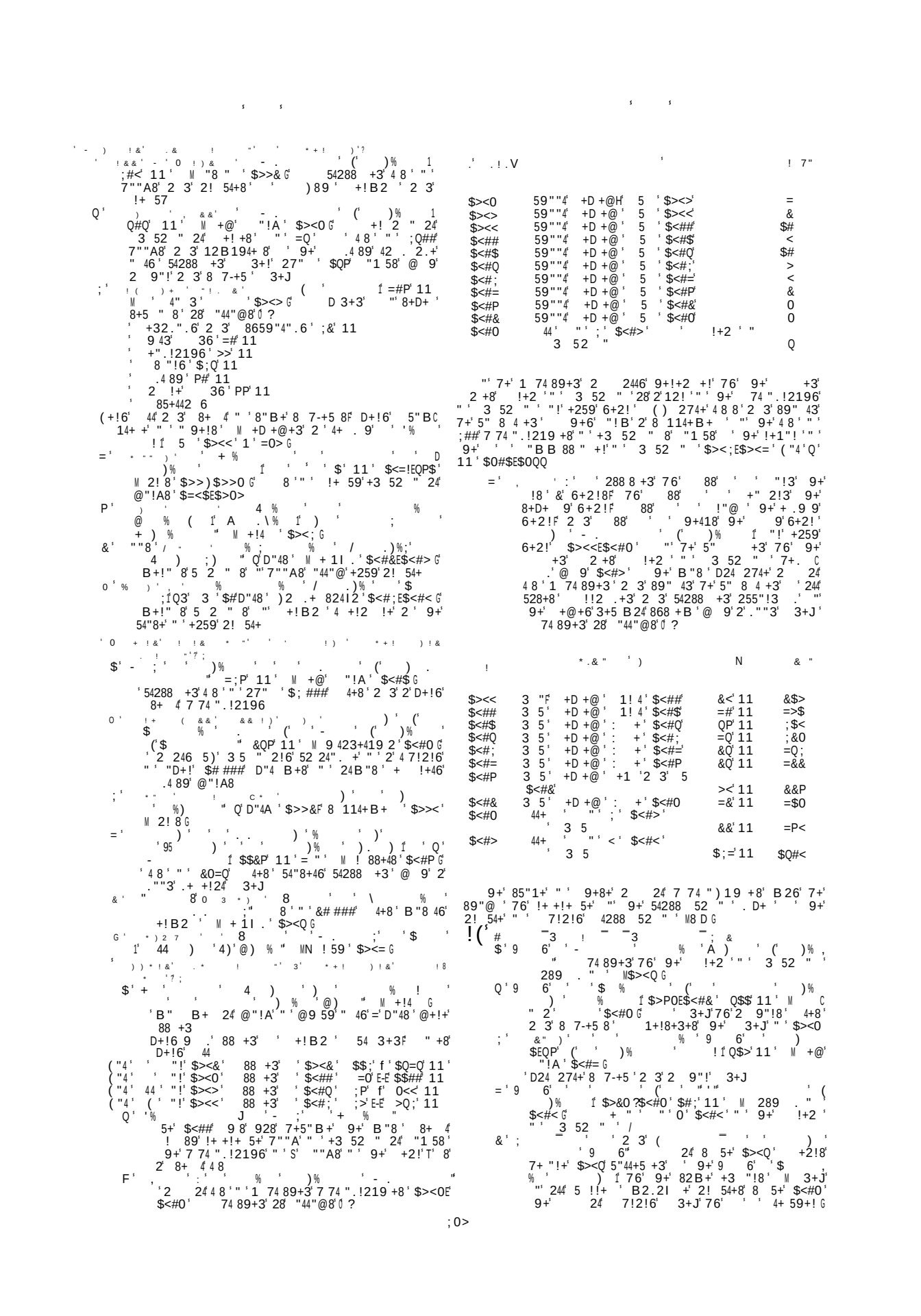
A Group of Theologians — Leaders in Education.

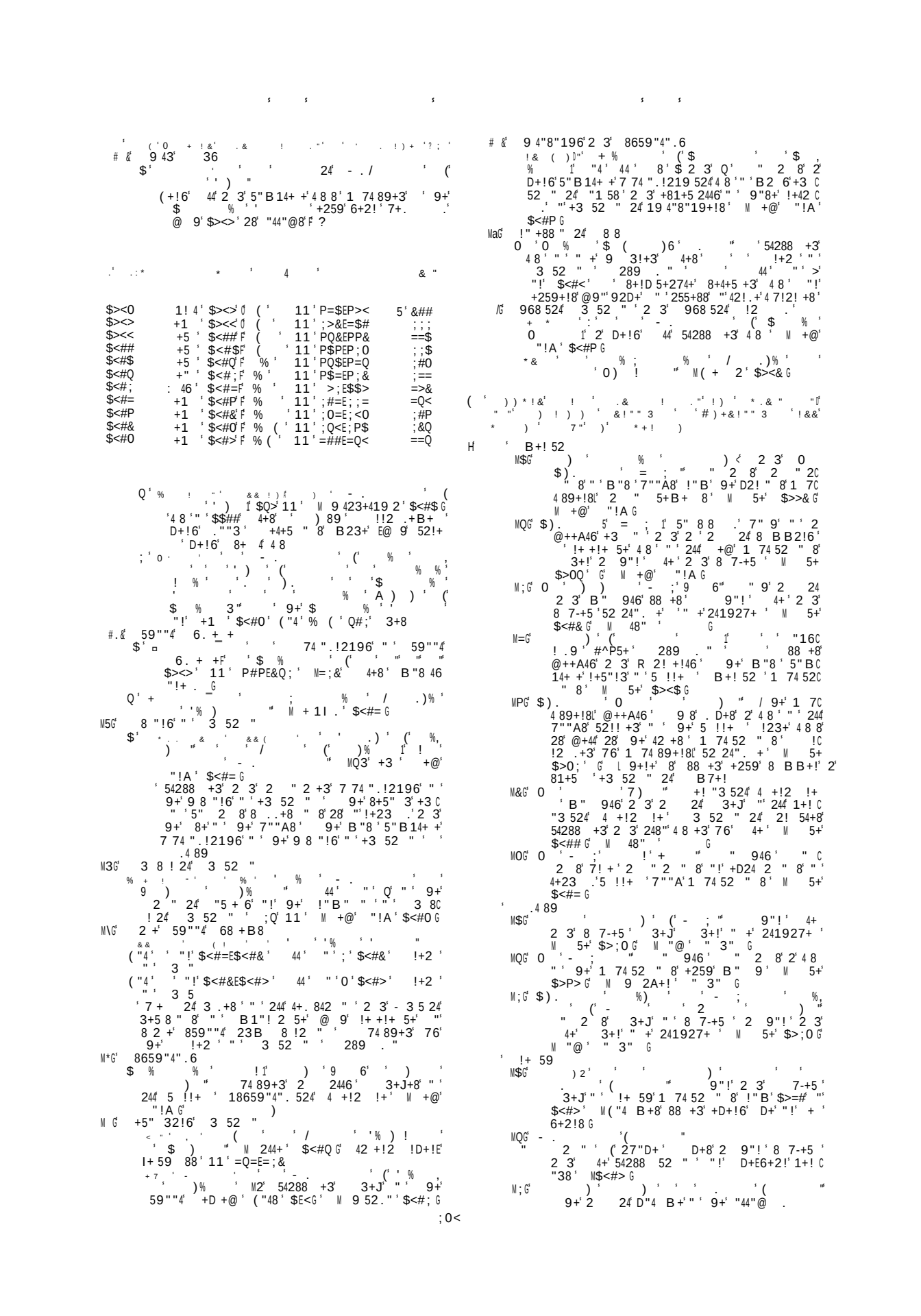


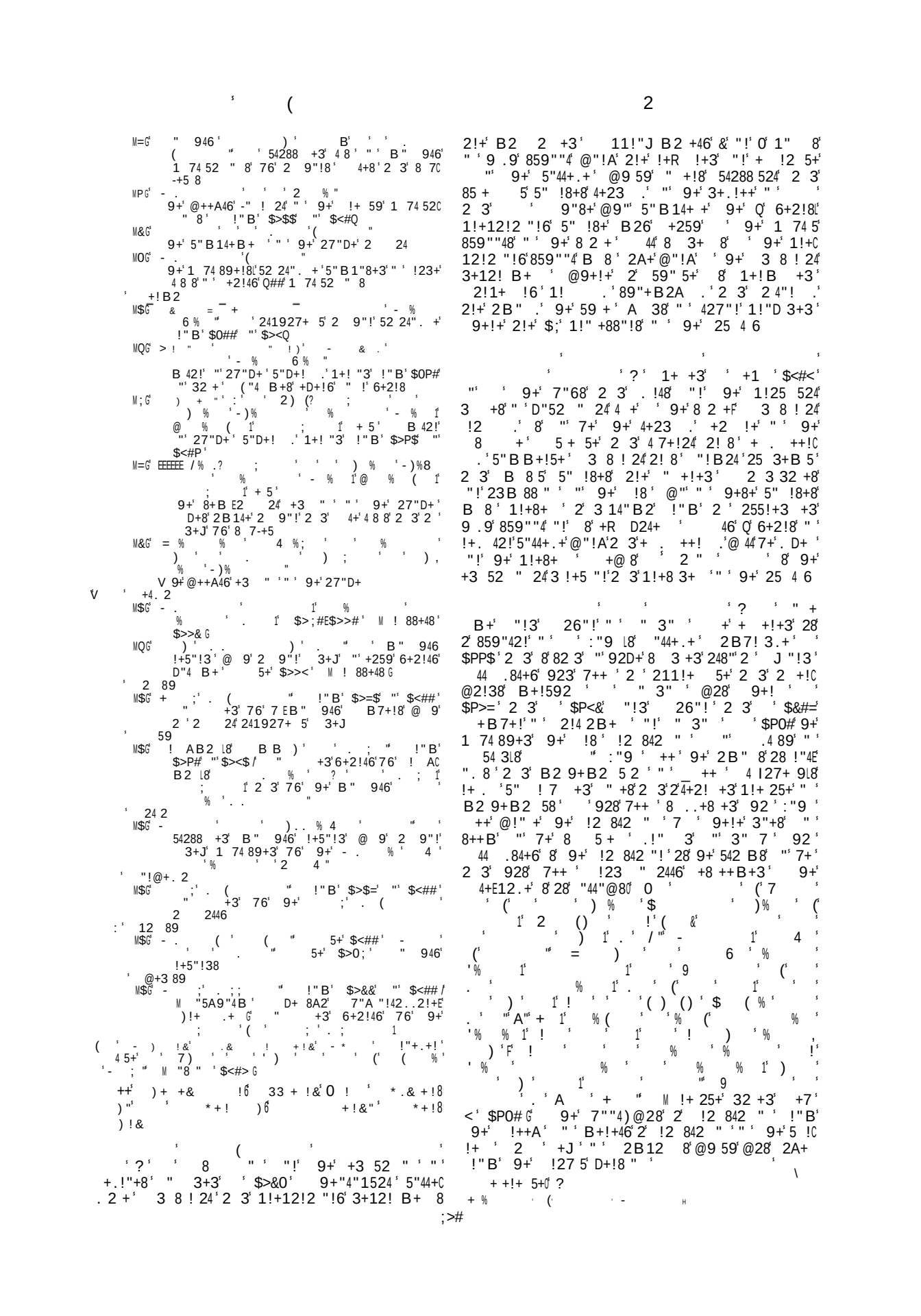


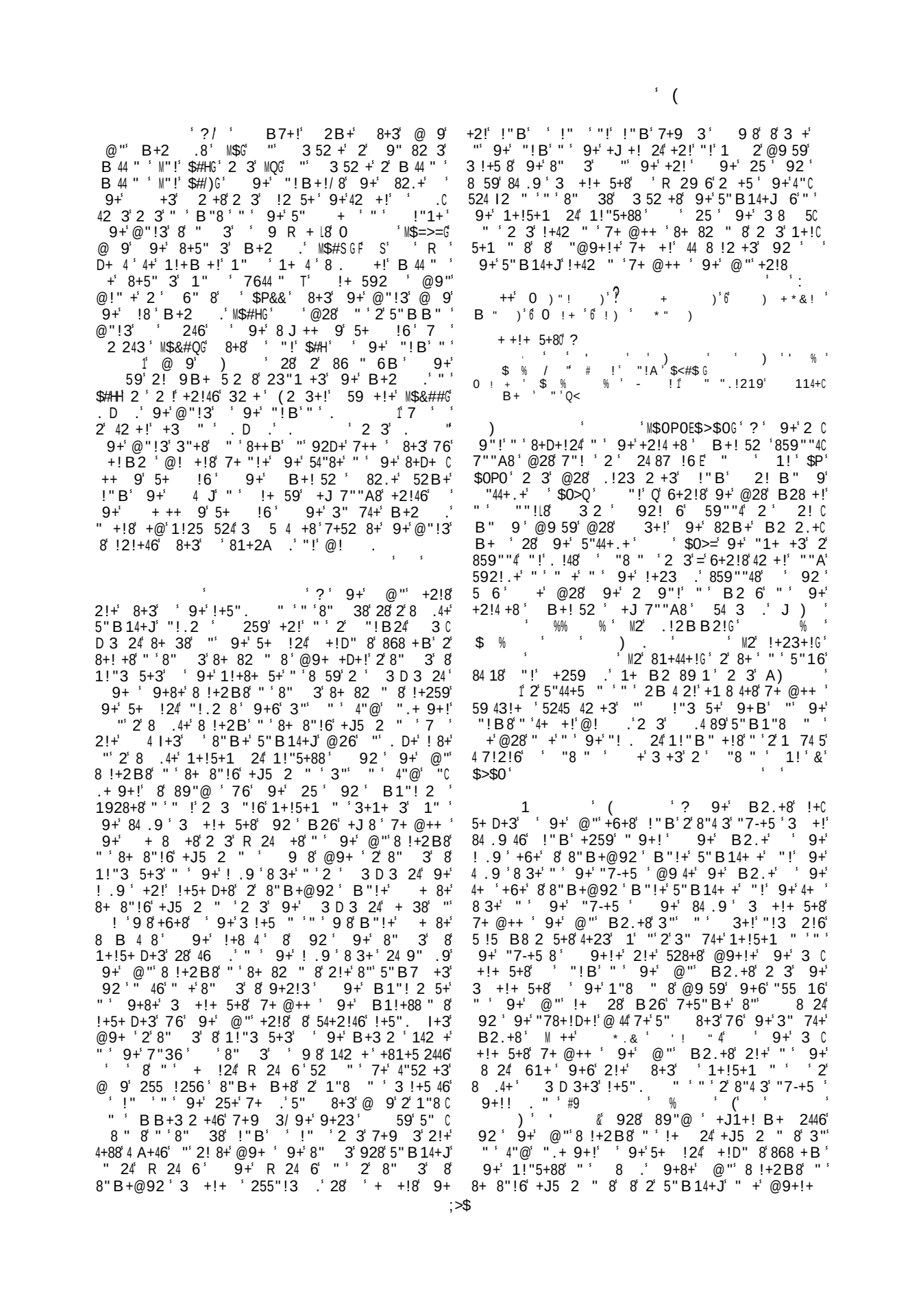












9+' @"' 8 !+2B8' +259' !+ 2 ' 9+ !' 3+1+ 3+ 5+' 2 3' B2A+' 2' 3+ +' 5" ! 7 " ' "' 9+' 5" BC 14+J' 1+!5+1 24' 1!"5+88' M ++' * ")6 + 8) 4' 9+' 1!"74+B' " ' 9+' !+5". " ' " ' 8"4 3 6' 9!" .9' 9+' 8/" '" ' @"' !+ 24' B2.+8' @28' +2!46' !+5". I+3' 28' 2' 1!"74+B' " ' 42!.+' 18659"4". 524' B1"! 2 5+' +!A+4+6' ' 9 8' ' 0 ! ' ' !' 0 ' (' 1' 1 7C 4 89+3' ' $0#<' 1" +3' " ' 9+' 3 5 4 6' " ' . D .' 2 6' 8 B14+' +J142 2 " ' " ' 1+!5+1 " ' " ' 8"4 3 6' 2 3' 3+1 9 ' 5+' 9+' !+ 24' B2.+' 8' " ' 2' 8 ! 25+' 244' 9!++' 3 B+ 8 " 24' 592!25 +!C 8 58' " ' 9 8' B2.+' B 8 '7+' !+.2!3+3' 28' !+3 5+3' ' " ' + !+46' +4 B 2 +3' "@' 2' 8"4 3' "7-+5 ' 52 ' 7+' !+5". I+3' 76' 2' 9 B2 ' 7+ .' 9!" .9' 2' 42 ' !+ 24' B2.+' @28' 9+' 1!"74+B' @9 59' +!A+4+6' 3 85 88+3' +' 2 8@+!+3' 9 8' R +8C " ' 76' 5244 .' 2 + " ' "' 9+' 8+ 82 " 8' " ' B"D+B+ ' 92 ' 2!+' 24@268' 1!+8+ ' ' D 8 24' 1+!5+1 " ' 9+8+' 8+ 82 " 8' " ' B"D+B+ ' 3"' " ' 9"@+D+!' 5"B 14+ +46' +J142 ' 9+' 1+!5+1 " ' " ' 8"4 3 6' 2 3' 9+' @9"4+' 1!"74+B' 928' 7++ ' " +' " ' 9+' B"8 ' 1!"3 5 D+' 8 7-+5 8' " ' +J1+! B+ 24' 8 36

7" ' 2' 5+ !6' 2 +!' +!A+4+6' 9+2 C 8 " +' 2 ' .4 89' 1968 5 8 ' 3+85! 7+3' 9+' 8 +!+"85"1+' 9+' 8 ! B+ ' @9 59' 9+' 3+C 85! 7+3' @28' B"3 +3' 76' 42 +!' 8 3+ 8' " ' 9+' 1!"74+B' " ' 7 "5 42!' D 8 " ' 2 3' 8' "@' A "@ ' 28' 2' 1"1 42!' "6' 2 3' 28' 2' B+2 8' " ' 8 ! 5 " ' 9+' 8 +!+"85"1+' 8' 2 ' 8 ! B+ ' @9 59' 9!"@8' "' +259' +6+' 9+' 81+5 24' B2.+' @9 59' @" 43' 2 !2446' 5"B+' "' 92 ' +6+' ' 9+' "78+!D+!' @+!+' 4""A .' 2 ' 2' 8"4 3' "7-+5 ' 9+ ' 9+8+' @"' B2.+8' 2!+' 1!+8+ +3' 9!" .9' 9+' 8 +!+"C 85"1+' 9+6' 8+' "' 2' 8 .4+' 1+!5+1 ' " ' 2' 8"4 3' "7-+5

9+' 3+D+4"1B+ ' " ' 7 "5 42!' D 8 " ' 8' "78+!D+3' ' 6" .' 59 43!+ ' 9!" .9' 2' 8 36' " ' 9+' B"D+B+ 8' " ' 9+ !'+6+8' ' 9+'7+. C .' " ' 4 +' 9+' @"' +6+8' 3"' " ' 5""!3 2 +' +J25 46' ' 9+ !' B"D+B+ 8' ' 42 +!' 4 +' 9+' 5""!3 2 " ' 8' B"!+' 5"B 14+ +' 9" .9' +D+!' 278"4 +' ' 5+! 2 ' 528+8' 9+' 425A' " ' 5""!3 C 2 " ' 8' 8"' B2!A+3' 92 ' D 8 " ' 8' " ' 446' 3+D+4"1+3' +D+ ' 2 ' 2' 42 +' 1+! "3 ' ' ' :

+ +!+ 5+8C ?

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' ' ? ' 9+"!+B' '
24.+7!2' !+42 .' "' 9+' 1"@+!8' " ' 2 ' +J1!+88 " '
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MJ f 2GX' g2FXf!) t) 2 f))T
,D"
'V@ M E4GM EQG) U2) ' '
$EQE;

"!' 244' D24 +8' " ' ' 1"8 D+' +.2 D+' +.!24' !25 " 24' "!' 5"B 14+J' ' 12! 5 42!' ' ' g' Q' @+' 92D+

'() *+, !! % +

2' 25 ' 1"88 746' A "@ ' "' 9+' 2764" 2 8 ' 2 3' 5+! 2 46' @+44' A "@ ' "' 9+' !++A8 ' ' 'a ' ;' @+' 92D+

MJE92GL g' JLE9 ' J) " f ;' J2L f "H

2' 25 ' 248"' A "@ ' "' 9+' !++A8
' @ 44' 7+' 8++ ' 92 ' 9+' 5"+ 5 + 8' " ' 9+' D2! " 8' 1"@+!8' " ' 9+' 7 "B 24' 52 ' 7+' 2!!2 .+3' 9 80' ?

#' 1"@+!' '
$8 ' 1"@+!' " '
Q3' 1"@+!' $ Q $
;3' 1"@+!' ' @ ' @' "
= 9' 1"@+! " 6' %' 6' '

2 3' 8"' " ' 9+' !8 ' A "@4+3 .+' " ' 9 8' 2!!2 .+C B+ ' " ' 9+8+' 5"+ 5 + 8' 8' 8 2446 ' 2 ! 7 +3' "' +4' M. D G ' 8 5+' 9+6' 211+2!' ' 9 8' ' % ' 9 ' " ' $P==' 9 8' 8' " ' 5"!!+5 ' 9"@+D+!' "!' 9+6' 211+2!' ' ! 2 . 42!' 2!!26' " ' 9+' 4+E12.+' " ' 9+' !8 ' +3 " ' " ' 1 2 8' M + +@ IG' ' ! ' !) ' !) 8)((4' %) 1' $PQO' 2 3' @+!+' 1!"72746' A "@ ' +D+ ' +2!4 +!' 9+6' @+!+' 2 +!@2!38' 8 3 +3' ' 9 8' "! B' 76' 2852' #:" "&1' 2 3' 9+ 5+' 9+' ! 2 . 42!' 2!!26' 928' 4" .' 7++ ' A "@ ' 28' 2852L8' ! 2 .4+

9+' .+ +!24' "!' ! 9 ' +! B' " ' 9+' 7 "B 24' 8+! +8' 928' "!' 8' 5"+ 5 +

M ?4GM ' ?QGE M ?!E G'
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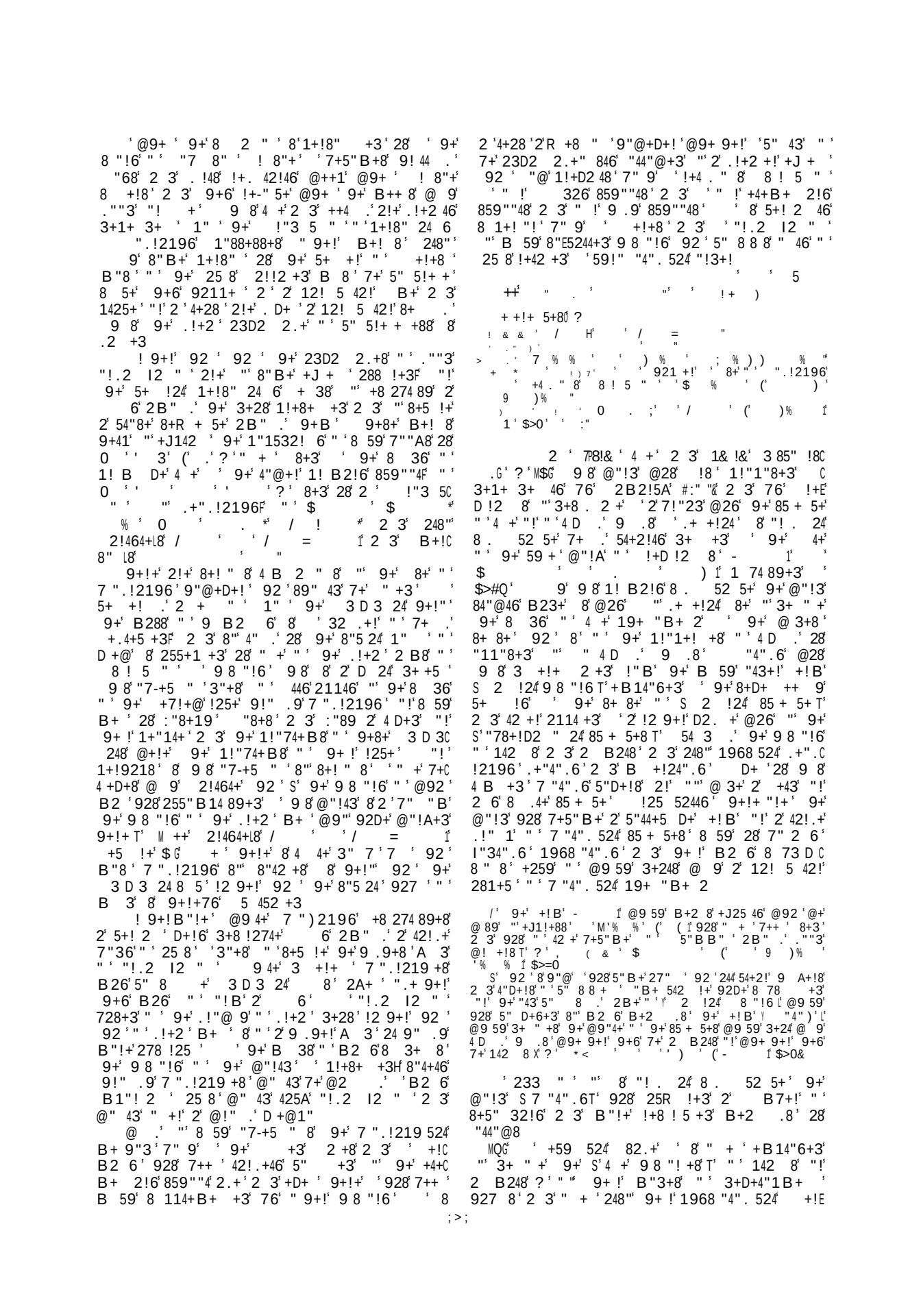
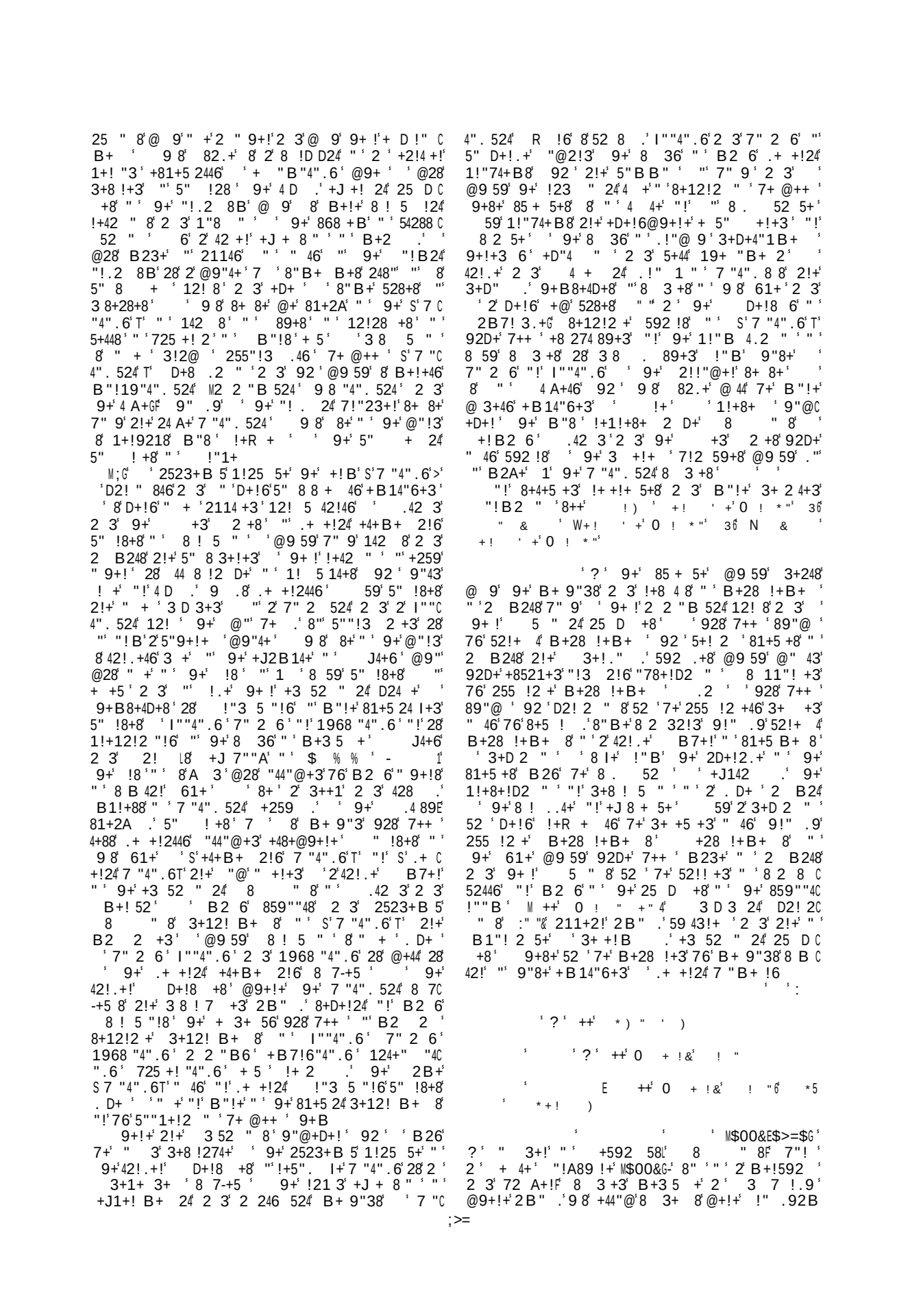
' '

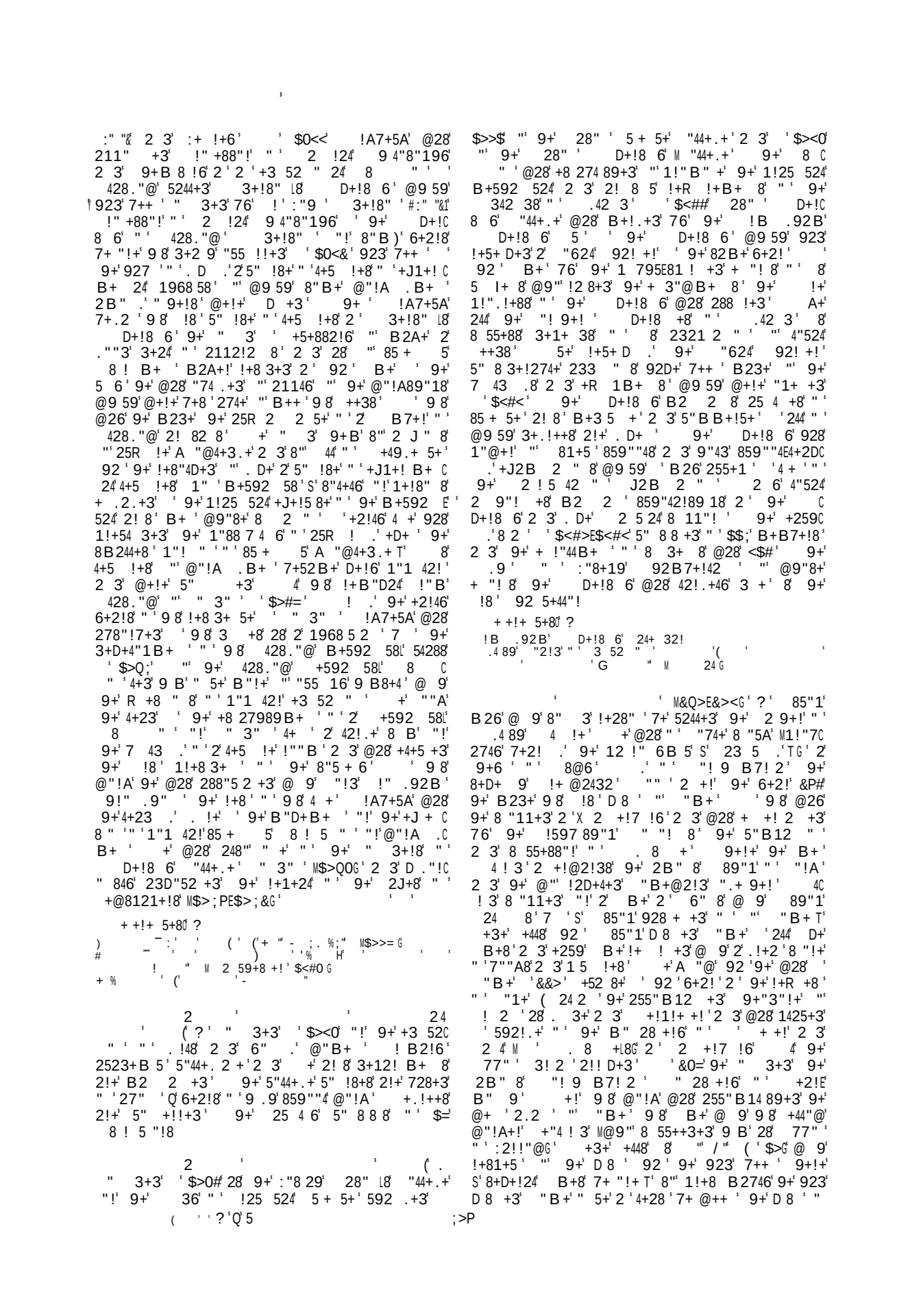
' ' ' '

?' 9+' 2 5 + ' !++A8' B23+' B 59' 8+' " ' 7 ".!2196' 28' 2' B+2 8' " ' +3 52 " ' + ' 9+' !+5 2 ' 9+!"+8' @+!+' "" B2 +46' !+42 +3' "' 9+' ."38' "' !2 A' 446' 28' B"! 24' B+ ' 2 3' 3 !+5 ' "7-+5 8' " ' B 2 " ' 3688+ 8' ' 9+' ' 8' 2' ."" 3' +J2B14+' 9+' "B2 8' B23+' 2!' B"!+' 8+' " ' 7 ".!2196 ' 1!+8+ .' 25 24' 9 8C "! 524' 592!25 +!8 ' 4 2!59L8' 1' "!' C 8 2 5+' 24 9" .9' @! + ' 76' 2' !++A ' 8++B8' "' 92D+' "!B+3' 9+' 728 8' "!' B 59' " ' "B2 ' +3 52 " ' ' 9+' 1!+8+ ' B+' 7 ".!2196' 14268' 2' D+!6' 1!"B + ' 12! ' ' 9+' +3 52 " ' " ' 6" 9 ' 7" 9' ' " !' "@ ' 5" !6' 2 3' 27!"23 ' B2 6' " ' " !' 859""48' ' 7+. 8' ' 9+' 4"@+8 ' .!23+8' ' 9+' "!B ' " 8 "! +8' 27" ' 289 . " ' 5"4 ' 2 3' " 9+!' +B + ' B+ F 2 3' @9 4+' B"8 ' +B1928 I+3' ' 9+' B 334+' .!23+8' " ' " !' +4+B+ 2!6' 859""48 ' ' !+5+ D+8' B 59' 2 + " ' ' " !' B"!+' 23D2 5+3' 8 36 ' 2 3' ' 4 +!2 !+' "!' 23 4 8

9 8' 1!"B + 5+' " ' 7 ".!2196' 8' 1!"72746' 3 +' 1! B2! 46 ' "' 9+' 8 !" .' +!+8 ' ' 1+!8" C 24 6 ' "' 4" .' 28' 9+' "7-+5 8' 27" ' 2' 59 43' "!' +J2B14+' 425A' 9 B2 ' 592!25 +! 8 58 ' 9+6' B 26' 7+' @2 .' ' +!+8 F 7 ' + 3"@' 9+B' @ 9' 1+!8" 24 6' 2 3' 9+6' 2!+' 4"D+3' 9+' 4 4+' . !4 ++48' 2 +5 " ' "!' 9+!' 3"44' "' 9+' +J + ' 92 ' ' 8' B2. +3' "' 8++' 9+2!' ++4' 2 3' 8 +!' ' 7"68' 2 3' . !48' @+!+' 28A+3' "' +44' 9"@' 2' B2 ' B .9 ' 4 D+' ' 9+' @+!+' 1425+3' " ' 2 ' 842 3' 76' 9 B8+4 ' 9+' 1!"74+B' B .9 ' 2!" 8+' 4 4+' +!+8







&P# 2 3 92 " &&> 9 8 12! 5 42!D 8 @28 " 3 2 +259+! B 8 5 2 3 8" 3 3"5 ! + 2 3 "1+ .2 9"8+ 725A @ 9 9 B :"9 77" " 2! L8 2 "B+ 92 9+ B .9 +259 9 8 B" 28 +!6 9+ 868 +B " 8 . 9!" .9" 9+ 6+2! 28 @28 1!25 5+3 2 + +!L8 "B+ :"9 L8 +3 52 " 24 @"!A 8 !+5"!3+3 9+ 82B+ 5921 +! " / ($>G + 2 .9 S 9+ 8 .+!8 9+ 82 3 B" 28 +!6 9+ "!3+! 2 3 B2 +! " 8 . 2 3 !+23 . 24" 3 T + 248" 5"B B +3 " @! . S 2 92 @28 !+R 8 + 9!" .9" 9+ @9"4+ 5" !8+ " 9+ 6+2! "! 9+ 1425+8 T + +J2B +3 " 9+ 5" 3 " " 9+ 2 9 .42 3 2 3 !+1"! +3 8" 3 :"9 3 +3 " 9 8 9"B+@2!3 -" ! +6 2 3 @28 7 ! +3 2! L8 9 !59 2 " !8 + B26 92D+ 7++ " + " 9+ +259+!8 " 9+ 7"6 +3+ @9" +448 8 92 9+ M +3+G @28 9+ 6+2! &># S . D+ 76 9+ 52!+ " A 8B+ 2 8+D+ 6+2!8 " 2.+ " 7+ +3 52 +3 76 9+ B"8 !+ "@ +3 277" + +3 5 2 3 2 +!@2!38 76 +"4 ! 3T " / (Q=G 9+ +J 6+2! M&>$G + +3 5 " 3+3 9+ " 28 +!6 " :2!!"@ M@9 59 "!B8 9+ 8+5" 3 12! " " 9+ @ B" 28 +!6 1!+8 3+3 "D+! 76 + +3 5 G 2 3 211" +3 +"4 ! 3 28 77" +3+ 1288+3 " :2!!"@ @ 9 +"4 ! 3 2 3 81+ 9+ !+8 " 9 8 4 + 9+!+ + +3 5 L8 " ! 9 -" ! +6 " 9 8 4 + 9+!+ + +3 5 L8 " ! 9 -" ! +6 " "B+ @+ 2!+ "43)) .) 248" 7!" .9 7""A8 !"B (+ 88 +442!8 +448 8 M 9+! +3 " " 9+ %% % / 1 1 QPOG 92 9+ + !59+3 9 8 @ B" 28 +! +8 S @ 9 ! !+ D+8 B+ 8 !+4 58 1 5 !+8 2 3 2 4 7!2!6 " D24 274+ 7""A8 @9 59 9+ 7!" .9 !"B 9+ " + 9+ ! 4+ @9 59 9+ !2B+3 "! 9 8 B" 28 +! +8 @28 + +3 5 +5"B1 4+3 !"B 8+D+ ++ 3 +!+ B" 28 +! +8 @9 59 9+ 923 D 8 +3 T 8 9 -" ! +6 " "B+ B 8 92D+ 7++ 7+ @++ &>$ 2 3 &>P @9+ 9+ B23+ 2 8 J 9 D 8 " " 9+ " C + S 24B"8 + !+46 3+D" +3 " 9+ 2 74+ " " " 7""A8 54 3 . 54288 524 7""A8 T M 2 368L / ! (% '% 1 ("4 Q3 +3 1 =&>G &>> 9+ @28 8 55++3+3 2 +2! B" 9 76 +"4 ! 3 @9 " ! 4+3 "D+! 7" 9 B" 28 +! +8 2 3 233+3 " + +3 5 L8 4 7!2!6 9+ 6) " 9+ 2 74+ @! + 2 +2! B" 9 "! :2!!"@ 2 3 "@ 2 4"!+ 5+ @+ 92D+ +J 2 +D 3+ 5+ " 9+ 5 4 !+ !"3 5+3 " "! 9+! .42 3 76 85"1 2 3 +"4 ! 3 "!+"D+! 8"B+ !+B2!A274+ 2 3 7+2 4 D+8 .+8 " 7" 9 277+68 !+B2 28 12! 8 " 9+ 12! 89 59 !59+8 +2!C B" 9 2 3 :2!!"@ +3 5 85"1 3 +3 " :2 $#& >< @9 4+ 9 8 +44"@ @"!A+! +"4 ! 3 8 !D D+3 44 0$& @9 59 6+2! 9+ !+8 . +3 9 8 " 5+ 2 3 3 +3 2 2 .!+8 " 9 8 @26 " B+ 9+8+ @"!A+!8 2!+ 3+ +4 A8 9+ +3 52C " 24 4 +5" +5 . . 8 +M. [G 9!" .9 9+"3"!+ 2 3 3! 2 @ 9/ +3+ M. G .7+! " "!A 2 3 45 M. 2G : ^ 3+

) ! ! L..) 2 3 % % / I % M " 3" $>>$G

M$>#>E$>>#G ? 59""4C B2 +3 52 +3 2 2B 4 " 523+B6 2 3 2 !"@ D+!8 6F "! !"@ D+!8 6 M$>;OE$>;>GF 8 1+! + 3+ " 9+ 859""48 " !"D 3+ 5+ 9+ !8 5 6 8 1+! + 3+ 56 +8 274 89+3 9+ +3 2 +8 !"B $>;> "$>P=2 3 !8 8 1+! + 3+ " 9+ 859""48 " "8 " M$>P=E$>PPG E

M$OOOE $>PPG ? 3 52 "! 2 3 +J 7""A @! +! @28 +3 52 +3 9+ 859""48 " 5" 42 3 2 3 2 9+ D+!8 6 " 3 7 !.9F 9+ @28 1!" +88"! 2 9+ !2 864D2 2 D+!8 6 !"B $>#; "$>Q=F 2 2B D+!8 6 !"B $>Q= "$>=P 2 3 1!+8 3+ " 2!B+!8 "44+.+ +2! 5 2 !"B $>=P "$>PPF 2 9"! " 2 8+! +8 " +J C 7""A8 4". 5 5 D 58 + 5

L (% (? 5"+3 52C " 24 8 " " 3+3 $>=P 2 3 23B C 8 +!+3 76 2 "!1"!2 " 5" 8 8 . " 9+ 7 89"18 " 9+ .4 52 9 !59 " 9+ !"D 5+ " _ +7+5 2 3 9+ ! 8 ++8 2 3 5"44+.+ 5" 5 4 211 +3 76 9+B !+12!2 "!6 5"44+.+ 2 3 9+"4". 524 5" !8+8 2!+ " +!+3 "! 9+ 3+.!++8 ; 6+2!8L !+8 3+ 5+ 8 !+R !+3 9+!+ 8 2 25 4 6 " ; 1!" +88"!8 2 3 P 4+5 !+!8

L ? 9+ B1"! 2 5+ " 9+ 12! 1426+3 76 7 89"18 9+ 9 8 "!6 " B"3+B +3 52 " 8 5+ 9! 8 2 6 7+52B+ 9+ +8 274 89+3 !+4 . " " 9+ "B2 B1 !+ 52 92!346 7+ +J2. .+!2 +3 9+ 9+! " 9+ @9"4+ 92 12! 928 7++ "! 9+ 23D2 5+B+ " " +3 52 " "! 9+ !+D+!8+ B26 1+!9218 7+ R +8 " +3 3++3 " +D +@ 9+ 9 8 "!6 " +3 52 " B26 7+ 5" 8 3+!+3 28 9+ 9 8 "!6 " 9+ +4 B 2 " " +1 85"124 2 9"! 6 !"B 2 819+!+ @ 9 @9 59 928 "! 1!"1+! 5" 5+! " 9+ B1"! 2 5+ " 9+ 4 + 5+ " 9+ 7 89"1 " 9+ 859""4 9+!+ 52 7+ "R +8 " 9+ 9+ 9 8 "!6 " B"3+B 859""48 7+. 8 9+ 7 89"18 @+!+ 9+ " 46 2 3 9+6 !+B2 +3 "! B2 6 5+ ! +8 76 9+B8+4D+8 "! 9+ ! " 5 248 9+ 59 + +3 52 "!8 2 3 3 !+5 "!8 " +3 52 "!8 2 3 9+ !859""48 9+ 59 + 8+2 8 " +3 52 " 9!" .9" +8 +! !"1+ @92 +J25 32 + 9+ 1 74 5 859""48 " .!2B B2! 2 3 "!9+ "! 5 B2 2 +3+ 9+!76 9+ 5+ !24 2 9"! 6 " 9+ B1+!"!" " 9+ 85 8 "! 76 9+ 4"524 2 9"! 6 9+ B 5 1 B " " 4"524 38 3 +3 " 2 3 @+!+ 8 1+!8+3+3 76 9+ +1 85"124 859""48 8 92!3 "! 826 @ 9 5+!C 2 6 2 4 9+ 1 74 5 859""48 8 44 4" !C 89+3 9+ " ! 9 5+ !6 @9+ 8" 8 D+8 2 1"+ 524 255" " 9+ 859""4 " "!3+2 J

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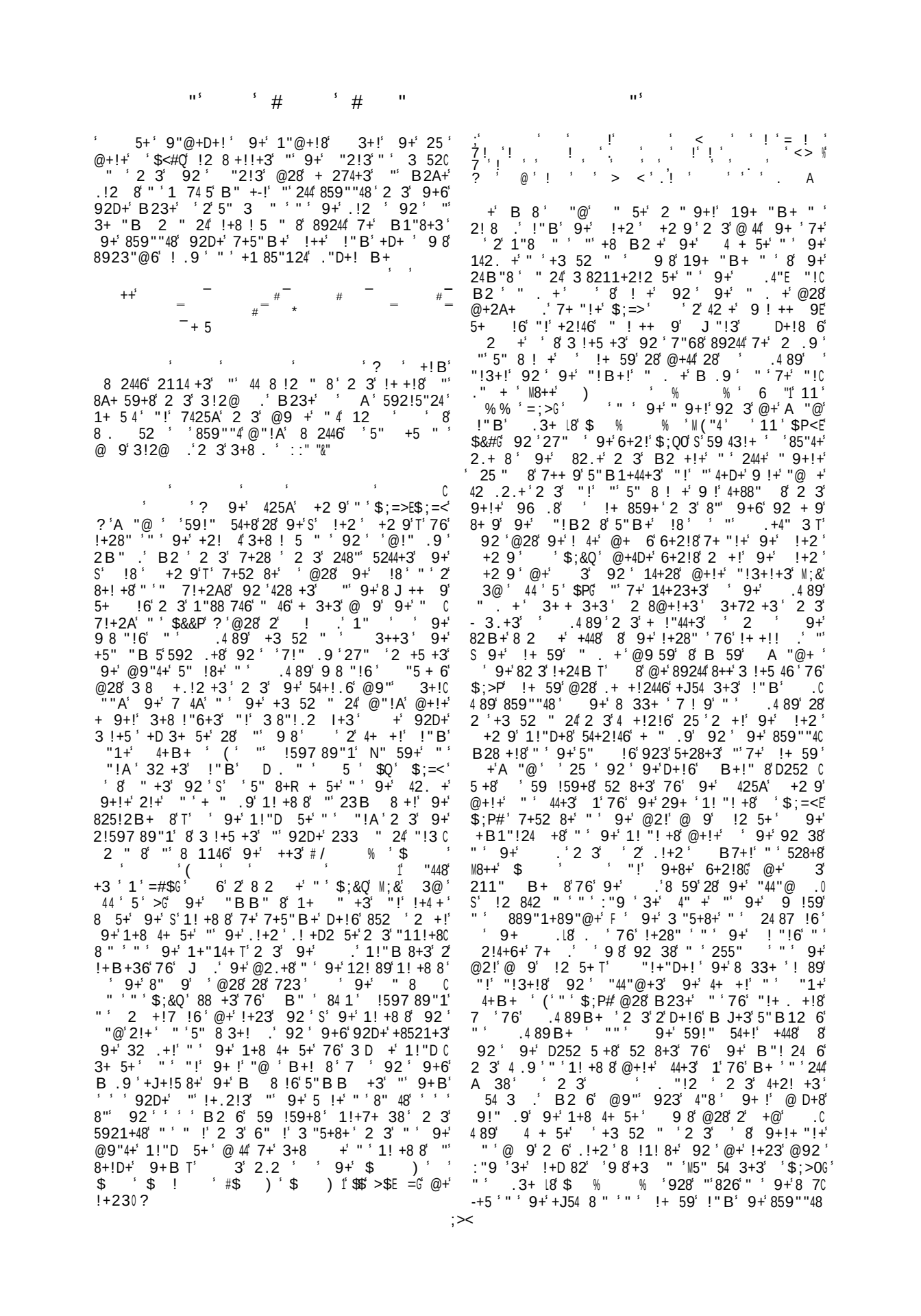
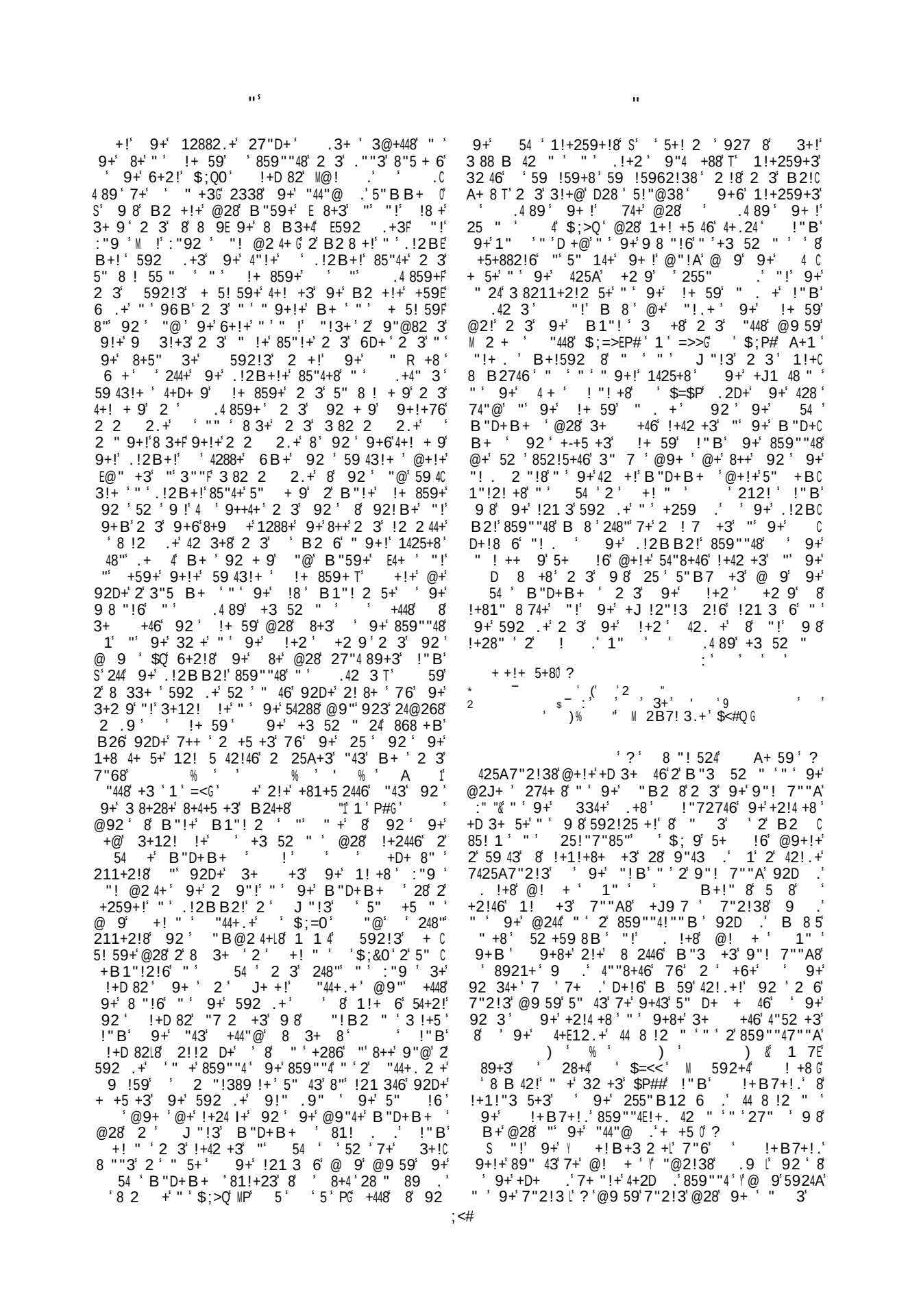
@9 4+ 3" 8 1"44 2! 8 5" 8 4 2 3 9+ 7 89"1 81+2A8 " 9+ 859""48 " (+ +' &! E . + J 2 3 6" 8 28 42 + 28 =>;
246 8 5+! 2 92 9+6 4" ! 89+3 9+ !8 924 " 9+ 8 J 9 5+ !6 "! "3 8 2 2 D+ " 2 4 89"1 " 5 B M 2D 2G !" B P$;' "' PQ$ 928 1!+8+!D+3 Q> 81++59+8 5" B C 1"8+3 "! 9+ 859""48 " !9+ "! 5 2 2D 2 2 3 "! 42 859""4 @9+ 2 +19+@ @28 23B +3 " (+ 2 8 "! 2 8 2 9"! " 2 1"+ 524 4 + " 2! " !8 PO#' 2 2 D+ " 246 7"! 2 !+D 8" +448 9"@ 9+ 923 9 8 6" 9 4 5A+3 1 9+ 8B244 8 !+2B " 9+ @2 +! " .!2B B2! 2 3 2A+ 2 84 .9 3! A " " 9+ 3++1 1""48 " !9+ "! 5 !2 5+ 1 74 5 859""48 923 2112!+ 46 3 8211+2!+3 76 9+ 8 J 9 5+ !6 "! !+.C "!6 " " !8 9 B8+4 8 !+5"!3+3 "' 92D+ 7++ 7!" .9 1 2 4+! B" " 9+ 1 74 5 859""4 7 76 7 89"18 244 8 2 3 D 8 9+ 3+ 52 " " 9+ +1 85"124 " 5+ @ 9 92 " 9+ 859""4B28 +! @28 " + +5 +3 @ 9" "11"8 " "1+ !+."!6 9+ !+2 # % P=G @9"' 923 3B8+4 7++ P<P 8"' S @+44E.!" 3+3 .!2B B2! 4". 5 2 3 !9+ "! 5 92 "' " + " B+ @28 +D+ 8+5" 3 "' 9 B >' M !+. 0) " / " 2 %" % G !2 +8 +8 3+! 8 89"1 " (+ +' 7+52 8+ C 28 @+ 52 " !+42 +@ 9" 892B+ 928 5" B+ "' " !' A "@4C +3.+ 92 6" !' 7!" 9+!9""3 +259+8 .!2B B2!' "' 5+! 2 1+!8" 8 @9 59 @+ 2A+ 244 9+ @"!8+ 28 5" D+! 8 @92 @+ "!B+!46 82 3 6" !' 2D" !' "' 42B+ 2 " 2 3 @"+ 8 5+ 9+ 1!2 8+ " 9! 8 52 " 4 + " " + B" 9 @ 9 9+ 1!2 8+ " : 1 +! " 8 3+!' 6" !8+4 @92 2 5! B+ 8 !' 7 89"18 "' !+5 + @92 @" 43 7+ B1!"1+!' "!'!+4 . " 846EB 3+3 426B+ T 9 8 4+ +!' 8 3" 746 +!+8 . 28 89"@8 " " 46 92 +1 85"124 +3 52 " @28 2 "D2C " 2 3 92 9 .8 @+!+ 2 !2 8 " 24 8 2.+ 1288 .' !"B 9+ 426 2 3 3++3 9+2 9+ 1 74 5 859""4 "' 9+ +1 85"124 859""4 7 248"' 92 9+ +1 85"124 859""4 @28 2 .!2B B2!' 859""4 @9 59 9+ S 9+2 9+ T 54288 58 2 3 @+ B26 +!' (+!. 4L8 %) ? A %) 1 A ? 8 44 "!B+3 9+ 1! 5 124 12! " 9+ 5 !! 5 4 B !+."!6 9+ !+2 3++3 @ 89+3 "' A 5A 3"@ 9+ 4233+!' 76 @9 59 9+ 923 ! 8+ 9" .9 9+ 923 7++ 5 "' 2 " 8 2 "14+ "!' & 6+2!8 9+ .4"! +8 92 9+ A "@8 "' !++A 2 3 928 @! + " 9 .' !++AF 2 3 8268 9+ 3+81 8+8 9+ 2! " 81+2A .' 2 .9 76 9+ !9+ "! 5 /859""4 B28 +!8 +' +R 2446 5" E V+B 8 9+ 2! " 12B B2! 2 3 3"+8 " !6 "' 2D" 3 9+ 5" 8 " " 528+8 S 7+52 8+ 2B 8 !" .46 " "1 " 92 " 8 2 3 . 6 92 9+ @"!38 " 9+ "!254+ " +2D+ 89") 3 7+ !+8 !2 +3 76 9+ ! 4+8 " 2 8T #:" "&! 9+ .!+2 .!2B B2! 2 @9"' @28 :+!" B+L8 859""4B28 +! @9"8+ .!2B B2!' !+ . +3 @ 9" 2 ! D24 9+ 859""48 44 $P=# 8 3"!+ " +D 44+ 8" B+ ;#6+2!8 !+."!6L8 - "! @9"' 923 "' .9 "!' 9+ 2 9"4 5 2 9 @ 9 2 ! 2 A . 9" .9 9+ "!723+ 9+ B" A8 "' !+23 9+ 54288 58 9" .9 .!2B B2!' 859""48 +5+882!6 "!' 54+!A8 S + +!' .!2B B2!' 92 9+!+86 T 2 3 9+ 9 B8+4 2 .9 2 3 1!"3 5+3 9 8 1 @9 59 @28 9+ 59 + + 5654"1+3 2" 9+ 334+ .+8 !+."!6 9 B8+4 9+ D+!6 4+ +!' "' +8 3+! 8 27"D+ B+ " +3 5" B B2 3+3 9+ B 88 " 2!6 B" A . 8 +:" "& " 9 8 @26 "' .42 3 "' 272 3" 9 8 B" A 89 4 + 2 3 4 D+ @ 9 9 8 54+!A8 28 " 9+!' 7 89"18 3 3 +' 923 "' +259 9+ .4 89 5" D+! 8 2 8"' 92 9+6 B .9 3+!8 2 3 9+ D+!6 +4+B+ 8 " 9+ !' +@ 5!++3 2 3 7+ 274+ "' !+23 8 825!+3 7""A8 3 3 " 2112!+ 46 "55 !' "' 2 6 " +' 3"' @92 9+ B "3+! B 88 " 2!6 3"+8 2 3 !2 842 + 9+ 825!+3 7""A8 "' 9+ 72!72! 2 3 24+5 "!' 8 D+!6 @"!38 9" .9 9+B8+4D+8 " 46 2 !2 842 " 923 25R !+3 2 8 1+!8 " 8 82 5 6 + 5+ . 8 + B 8 92D+ 8+ 1 2 859""4 8"" 2 +! 9 8 2!! D24 4 .42 3 "!' 8"B+ ;# 6+2!8 42 +! & $ @9+ 28 .4 2 @28 9! 8 2 I+3 3+!' . .+7+! @9"' 923 7++ 721 I+3 @9 4+ +J 4+ 2 4 9+ S @ 89 . "' B 2 +' @92 9+ 923 8++ @+44 3" + 2 4 " 3+3 2 .!2B B2!' 859""4 % :))) & @ 9 9+ 288 8 2 5+" 89"1 +4 J @9"B 9+ 923 !+5+ D+3 !"B + 248"' 1!"D 3+3 9+B @ 9 89+!8 2 3 B28 +!8 2 +! 9+ B2 +!" 2 +!7 !6 T #)) & M +3+ %% " % $>G /' 9 8 8 1!"" 1"8 D+ 92 9+!+ @28 8 59 2 859""4 2 2 +!7 !6 " 24!+236 +8 274 89+3 !+1 2 " 8 59 92 +4 J 9" .9 2 !. 3 2 @9"' 923 7++ 8"B+ 9!++"!' " !'6+2!8" 46 2 +!7 !6 9" .9 + " .9 "' 8 2 9 8 859""4 9+ 5+ 2 3 " !"B' !2 5+ 8+4 9 8 12882.+ @9 4+ 3+B" 8 !2 +8 9+ +J 8 + 5+ " 9+ +1 85"124 859""4 2 2 +!7 !6 2 3 9+ " 32 " +' 2 +4 J 8 8++ " @ 59) 248"' 5" D+ + 46 2 9 42 +8 9+ 9+8 8 " ! 2 4 ".+! #) %) 1 $<#PG @9"' 2 +B1 8 "' +9"@ 92 !2 5+ 2 9 8 B+ 9+!+ @28 "' !+24 4+2! . 2 3 " 46 B" 28 5 859""48 @9+!+ 9+ B2 +8 @+!+ 2 .9 "' 9"774+ 9!" .9 9+ !' .!2B B2!' 8"' 28 "' !+23 9+ 1824B8 9+6 81+ 9+ ! B+ 8 . . 4+!D24 928 89"@ # %) 1 $><#PG 92 + 92 !+ @9"' @28 89"1 " 92! !+8 M5 P<=E&$=G 923 7++ B23+ %))) % @9+ 2 54+!A 3+!' 89"1 +11"4 @9"B 9+ 8 55++3+3 9+ 7 89"1! 5 9+ 4 + " + !"6 M Q$: + (#=G 1 5 !+8 9 B ." ." "' 859""4 !8 2 D!+ J +2!' 92! !+8 9+ 2 " + .42 3 @+ 3 &;P 9+ !8 89"1 " "!A 2 4 8 923 !"3 5+3 2 8" .' 859""4 M@9 59 52 92!346 7+ 3" 7 +3 @28 233 "' 2 .!2B B2!' 859""4G 2 3 :2B+8 9+ +25" 9+ +259+!' " 9 8 859""4 8 26+3 @9+ 2 4 8 4+3 !"B 2 9+2 9+ !+25 " 9+ 9! 8C 2 6 @28 !+8 "!+3 :2B+8 S 7+52 B+ B28 +!' " +554+8 28 524 8 . ." "' B2 6 2 +!' 9+ 289 " " "B+ 2 3 2 +!7 !6 T "B+ 9+ 8" ." 859""4 # % %) & 923 7++ 8 +3 76

"1+' !+."!6'9 B8+4 ' "' 92 '7+8 3+8' 8'.!2BC B2!'859""4' 2 +!7 !6'923' 8'8" .'859""4'2 3' 9+8+' @"' 859""48' 2!+' " 3' ' +D+!6' 8+5 42!' 52 9+3!24' 3"@ ' "' 9+' + "!B2 " ' 2 +!C 7 !6' 59""4'928'9 9+! "'7++ '@!" .46' B1 +3' "' 9+' !++A'2!597 89"1' 9+"3"!+'@9"'52B+' "' 2 +!7 !6' '&&<' 8'4+2! .'2 3' 92'" '9 8' 1 1 48' 92D+'7++ '5+4+7!2 +3'76' +3+'@9"'8268' 92' +D+' "' 9 8' 326' M0;P' 8"B+' 8 !D D+3' S'@9"' A +@' 2 '2 3' !++A'28'@+44'28' 9+ !' "@ ' 42 . 2.+' ' @9 59' 9+6' @+!+' 7"! T' 9+"3"!+'@+ '244"D+!' .42 3'1!+259 .'2 3' +259 .' 8'1 1 4' "7 28'@9"' 3 +3' 89"1' "' "59+8 +!' 'OQ&' 8' +81+5 2446'82 3' "' A "@' "' " 46' 2 '2 3' !++A'7 ' "' 92D+' S'2' A "@4+3.+' "' 4 +!2 !+' +554+8 28 524' 2 3' .+ +!24 T' 9+' 5+4+7!2 +3' 1"+B' "' 45 ' ' ' - ' ' ' (' ') % ' (' J ;!' @! + ' 27" 'O>#'8268' 92' !597 89"1' .7+!' MZ a G' @9"' 928' " + ' 7 ' @!" .46' 7++ '542 B+3'28' +3+L8'1 1 4' 2 3' 45 L8 "@ ' B28 +!' @28' 2 ' +B + ' +259+!' #) ' % & 9+!+' ' 9 8' 8 55+88"!' 9+47+! ' "!' 47+!' #:" "&!' 45 ' !+5"!38' 9"@' 9+' @28' 9 BC 8+4' +3 52 +3' ' "!A' 8 +!' 2 3' @28' B23+' S'23D"52 +' "' 9+' 54+!.'6'2 3' B28 +!' ' 9+' 5 6' "' "!A T' +!+' 9+' 2 .9' +D+!6 9 .' 9+' @9"4+' 8+D+' 4 7+!24' 2! 8' .!2BB2!' !9+ "! 5' 4". 5' B 8 5' 28 !" "B6' .+"B+ !6' 2! 9B+ 5' +81+5 2446' 9"@' "' 3' 28 +!' ? ' 9+' "!3+!' 8' 1!"72746'3 +' "' 9+' +J .+ 5 +8' "' B+ +!' !2 9+!' 92' 3+8 . ' ? ' 2 3' 42@' 2 3' 9+"4".6' "' 7"" ' 9+' 9+' 7+52B+' 2!597 89"1' 9+' 3 3' "' 5+28+' "' +259'C'7+ .' B23+' 7" 9' 2' @ 8+' +259+!' 2 3' 2' 1 " 8' 1! +8 ' 5!+28 .' 9+' 8+ 8+' "' 9 8' 1 1 48' 2 3' 9+' B"!248' "' 9 8' 54+!.6 T' '2 ' 47+! L8' 3+2 9' 9+' " 5+8' "' 7 89"1' 2 3' +259+!' @+!+' 8+12!2 +3' 2 7243' 7+52B+' 2!597 89"1' S'7 ' "' 9 8' " 9+!' 8" T' 45 ' 9 B8+4' S' 9+' .2D+' 9+' 3+2!+8' !+28 !+' "' 9 8' 7""A8' "' 9+' " +' 9+' ! 4+' "' 9+' 59 !59' 8' !+28 !+8' 8' 42 38' 8' 38' "' 9+' " 9+!' 9+' 8+2!59' "!' @ 83"B' 9+' 859""4' 9+' B28 +!L8' 592 !' 2 3' 9+' 7!2 6 T' 9+' 2 7243' ' 9+' 8 55+88"!' "' 45 L8' +44"@' 1 1 4' @28' 2!597 89"1' 45 ' @!" +' "' 9 B' "' 8 ..+8'2' ! 9+!'3 D 8 " ' "' 427"!'2 3' 9+' +8 274 89B+ ' "' 8+12!2 +' B28 +!8' "!' 8 .C .'2 3'@! . !"B' 9+' + 3' "' 9+' + .9 9' 5+ !6' 9+' 9+!+' 28' @28' 248"' 9+' 528+' ' !2 5+' 9+' 7 89"1' 9 B8+4' 5+28+3' "' +259' 2' 244' +D+ 8' ' 9+' 8+5 42!' 52 9+3!248' 9+!+' 28' 9211+ +3' ' .42 3' " 46' M+J5+1' "!' 2' +@' 81"!23 5' 528+8' 27!"23' '42 +!' 5+ ! +8G' 9+' 7 89"1L8' 5" 5 4' "' 54+!A8' 9+' 8+5 42!' 52 " 8' @28' ! +3' " ' "' B2A+' @26' "!' B" A8' '@" 43' 211+2!' 92' 9+' 7 89"1' 9 B8+4' 5" +3' "' +259' 9 8' 439+4B' "' 24B+87 !6' #:" "&' 8' 82 3' "' 92D+' 7++ ' 2 .9' 76' 89"1' 419+.+' 2' 59+8 +!' ' 9+' B" 28 5'4 D+8' B 8' 7+' !+5+ D+3' @ 9' 2' .!+2' 3+24' "' 52 " ' ' 8' 5+! 2 ' 9"@+D+!' 92' ' 9+' 8+5 42!' 52 9+3!248' 76' 9+' +4+D+ 9' 5+ !6' 9+' 3 6' "' " 46' "' +259 .' 7 ' "' 8 1+!D 8 .'859""48' 2 3' 211" .' B28 +!8' 923' 7++ ' 3+D"4D+3' " ' 9+' 859""4B28 +!' "!' 28' 9+ 52B+' "' 7+' 5244+3' 592 5+44"!' " ' 9+' 59 !59 H2 3' 9+' 52 9+3!24' 859""48' :" "&' 7+52B+' B "!+' "!' 4+88' 3+1+ 3+ ' " ' 9+' 7 89"18' ' 9+' B" 28 5' 52 9+3!248' 9+' 7 89"1'!+ 2 +3' 9+' 1"@+!' ' 9 8' "@ ' 92 38' 9+' B" A8' 28' 4+2! +3' 1+!8" 8' # &!' " ' 7+ .' 5" 8 3+!+3' 521274+' 2112!C + 46' " ' +J+!5 8 .' 9+' 3 6' 1!"1+!46' 2 3' 9+' B28 +!8' @+!+' 24@268' 8+5 42!' 54+!A8' 9 8' 2' 59+8 +!' @+' 3' 9+' 7 89"1' '$$PP' 7+ .' 211+24+3' !"B' " ' 2' 3+5 8 " ' 28' "' 9+' 1 .9' "' 9+' 859""4' 7+ @++ ' @"' " ' 9 8' 54+!A8' 2' 2 C +!7 !6'@+' 3' 2' !+85! 1' " ' !597 89"1' +5AE' 92B' '$Q><' 28' "' 9+' 1"@+!8' " ' 9+' B28 +!' "' 3+ +!B +' 528+8' 7+ @++ ' 9 8' 859"42!8' 2 3' " C 8 3+!8' 2 3' '$Q<P'@+' 3' 9+'82B+'2!597 89"1' 211" .'2' B28 +!' " ' 9+'859""4' " ' 9+'5 6' " ' "!@ 59' " '7+924' " ' 9+'7 89"1' @9+ ' 92'8++' @28' D252 ' '@9"4+'8+! +8' " '211" B+ 8' " ' 9+' .!2BB2!' 859""4' B28 +!8' " ' 2 +!7 !6' B23+' 76' 9+' 2!597 89"1' 2!+' 1!+8+!D+3' ' 9+' 2!59 +1 85"124' !+. 8 +!8' 2 ' 2B7+ 9' !2 . .' !"B' " +' " ' 2!' $$' $;$#' "' 9+' + 3' " ' 9+' ++ 9'5+ !6'@9+' 9+'1!"!@! +8' "' +44' 9 8' S'. 3+' 23+!9""3' T' 92' 9+' 928' " 3' 2' B28 +!' @9"' 923' 2 .9' .!2BB2!' 2' 59+8 +!' 2 3' ' 9" 6L8' " 3" ' "!' S'6" !' .!2BB2!' 85"4+' 2' 2 +!7 !6 T' ' "!5+8 +!' ' $;$Q' 9+' 7 89"1' 211" 8' 2' B28 +!' "' 9+' 859""4' " ' 92'5 6 @9+ 9+!' 9+' 211" B+ '7+4" .8' "' B6' +1 85"124' "!' B6' 2!59 3 25" 24' 2 9"! 6' T' B 42!' 211" B+ 8' 2!+' " 3' 2' 46' 2 3' 2!4 84+' ' 9+' + "!B2 " ' 9+8+' 859""48' @+!+' B23+' 12!' " ' 9+' +@' 52 9+3!24' " 32C " 8' 2 3' 1288+3' !"B' 9+' 7 89"18' "' 9+' +@' 5921 +!8 ' 9+' + "!B2 " ' 7!" .9' 9+' 7 89"18' 2.2 ' "' 3 !+5'5" +5 " '@ 9'244E 9+'859""48' + !6' (' _ ++ ' 2!6'2 3' _ ++ ' 4 I2C 7+ 9'+259' ' ! ' 9" .9' !"B'"11"8 +'1" 8' " ' D +@' 3 !+5 +3' 9+' 7 89"18' "' +J2B +' 244' 859""4B28 +!8'2 3' 3 .' 9+B'8 81+5 ' "' !+C B"D+' 9+B' 9+'52 " 8" ' 9+' 9 !59'2 3' 9+' "!3+!8' " ' 9+' ! D6' " 5 4" ' 8 55+88 D+' "552C 8 " 8' ' $PP<' $P>#' 2 3' $&#;' "!723+' 2 6' 859""4B28 +!' "' +259'@ 9" ' 9+'4 5+ 8+" ' 9+' 7 89"1' @9 4+' ' @28' B23+' 9+' 3 6' " ' 9+' 7 89"1'3 46'52!! +3' " ' 2 '+D+!6'D 8 2 " ' "' R !+'@9+ 9+!' 2 6'859""4B28 +!" ' 8 81+5 +3' !+4 . " ' "!' + + 8' 4 5+ 8+3' "' +259' 76' 9 B' 3" 9' +259' '2 6'1 74 5'"!' 1! D2 +'1425+'@ 9 ' 9 8'3 "5+8+' 9 8' +J + 3+3' +D+ ' "' +4+B+ 2!6' 859""48' +!' 9+' 5"B B" @+24 9' 8 55+88 D+' 3+5 8 " 8' " ' 9+' " ! 8' " ' 2@' " 3+3' " ' 723' 9 8 "!6' 2 3' 42@' 7 ' ."" 3' 1"4 56' !23 2446' !+8 ! 5 +3' 9+' 7 89"1L8' - ! 83 5 " ' "' .!2BB2!' "!' 54288 524' 859""48' ' @28' " ' 44' 9+' C 3"@+3' 59""48' 5 ' $>&<' 3 !+5 +3' 9+' 5" B)' 8 " +!8' 3+!' 92' 25 F 2 +!@2!38' 9+' 92! 6' "B B 88 " +!8' "' 8+!' '244' 859+B+8' 2' 542 8+' 27"4 89 .' 9+' - ! 83 5 " ' " ' 9+' "!3 2!6' 92' 9+' 7 89"18' 5+28+3' "' 92D+' 9+' ! .9' "' +! +!+' @ 9' 8+5" 32!6'859""48' 9+'! .9' 8 44' 1!+D2 48' 9+"!+ 52446' ' 9"8+' 859""48' @9 59' 92D+' " ' 6+' 7++ ' B23+' 9+' 8 7-+5 ' " ' 859+B+8' 3+!' 9+' 25





every schoolroom — 'in Latin, a Latin verse or a maxim from a complete oration or from the proverbs of Solomon, Cato or others like them, and with it two German verses, rhymed or unrhymed, according to the Latin meaning' — the German translation was thus in verses, that

they might better stick in the memory." (See *Monographien zur deutschen Kulturgeschichte*, Band IX, *Der Lehrer in der deutschen Vergangenheit* p. 53.)

In the first edition of Comenius' *Orbis Pictus*, published in 1658, he shows a schoolroom, on the wall of which there hangs a blackboard, and in the tabulated description of the things in the room, he says *Quaedam praescribuntur illis Creta in Tabella.* (Certain things are written down before them with chalk on a little board.) Hoole translates *Tabella* by the English word "table" and this in spite of the fact that the figure 6 designating this object is placed alongside of the board hanging on the wall. Besides, the primary meaning of this word is not table, but little board or plank.

From this it is entirely safe to say that the blackboard was, if not a customary thing, not an unusual thing to be found in the schoolroom in the days of Comenius. We have further evidence in Brinsley's *Ludus Literarius*, published in 1660.

When we come to the educational literature of our own country, it is exceedingly difficult to find much information about the kinds of blackboards used in the schools prior to 1820. About this time, if we may rely on Joseph B. Felt in his *Annals of Salem* (see p. 469), Vol. I, "blackboards were used in our common schools, for arithmetical calculations. Manuscripts of sums, set for pupils by their masters, which had continued for a long period, began to be laid aside." Blackboards were introduced into the Military Academy at West Point in 1817 by Mr. Claude Crozel, a graduate of the Polytechnic School of Paris. A blackboard was introduced into Bowdoin College by Instructor, afterward Professor, Smyth in 1824. The account runs: "That novelty, let me say, made a sensation. When he had tested the experiment in the Sophomore algebra, and with great success, a considerable portion of the Juniors requested the privilege of reviewing the algebra under the new method at an extra hour, — a wonder in college experience; and that blackboard experiment, I am sure, led to his appointment as assistant professor of mathematics a year later. . . . The blackboard caused an important change in the manner of teaching generally, but especially in mathematical branches. In arithmetic, a Freshman study, and algebra, to which we were introduced at the opening of the Sophomore year, each student had his slate, and when he finished his work, he took the vacant chair next the teacher's and underwent examination of process or principle involved. In geometry we kept a manuscript in which we drew figures, and demonstrated from them." (*History of Bowdoin College*, by Cleveland and Packard, pp. 90–91.)

In the *Report of the School Committee* for Boston in 1823 (p. 54), the following reference to the use of a blackboard is made: "In learning Geometry the diagrams of Euclid are taken off, first on paper, with figures instead of letters, that nothing may be committed to memory without being understood. When they have been demonstrated from the paper, they are afterward drawn by the pupil on the blackboard, with figures; when the proposition is demonstrated without a book, or any aid to the memory whatever." In William A. Alcott's famous prize essay presented to the *American Institute of Instruction* in August, 1831, he gives a floor plan of an ideal school, with its furniture in place. In this are shown two large blackboards on movable frames, and they are placed immediately behind the rear row of seats, and serve the double purpose of a blackboard and a screen from the front door. In 1839 Dr. Henry Barnard wrote in his *First Annual Report to the School Commissioners of Connecticut.* "Blackboards are not uncommon, but are but little resorted to by the teacher."

Construction and Hygiene of. — When we come to a consideration of the construction of blackboards, we find that up to pretty well toward the middle of last century they were almost invariably of wood painted or stained black, and were generally on movable frames or so fashioned as to be hung on the walls where need dictated.

If easy vision were the only matter for consideration, blackboards would be condemned outright, and in their places would be substituted some form of unglazed white or cream-colored surface, upon which black crayons would be used; for investigation has made it clear

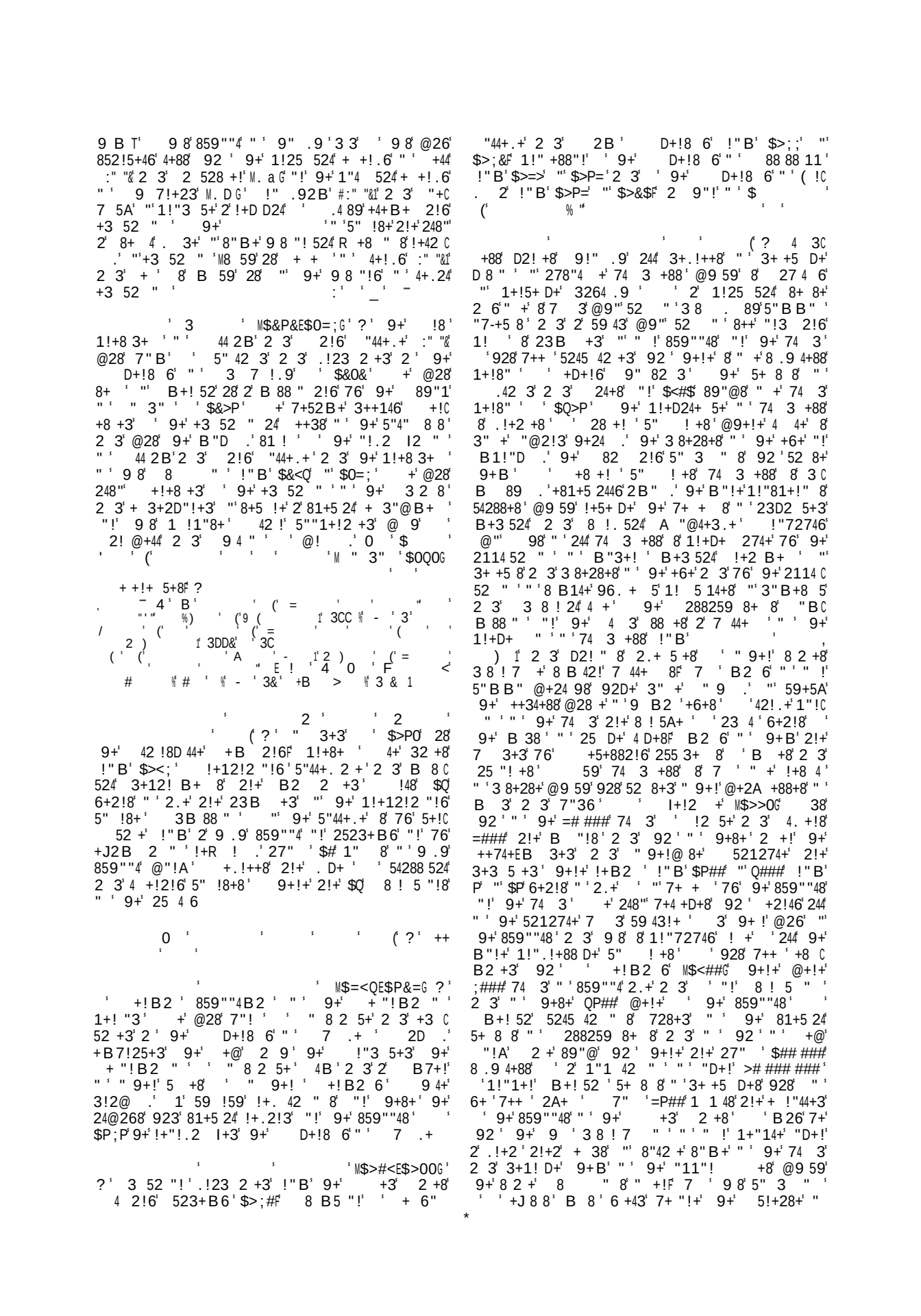
92 2 7425A 4+ +! " 2 @9 + 725A.!" 3 8 B 59 B"!+ +28 46 !+23 2 2 3 8 2 5+ 92 @9 + 4+ +!8 1" 2 7425A 8 ! 25+ "9 9 8 / (1 R " +8 "! +! @ 9 21 1!"D24 @9"" 8268 S 9+ 96. + + " 9+ +6+ 3+B2 38 9+ 72 89B+ " 842 +8 2 3 7425A 7"2!38 !"B" !859""48 2 3 9+ 8+" 1+ 2 3 A 9+ ! 1425+ "B14 2 5+ @ 9 9 8 3+ B2 3 @ 44 3"" 8"B+ 9 ." 3 B 89 9+ 32 .+! "89"! 8 .9 2 32 .+! @9 59 7+5"B+8 B"!+2 3 B"!+ B+ 25 ." +259 8 55+88 D+ .+ +!2 " T 9+!+ 8 "@ "" R +8 " " !"5" !6 5" 5+! ." 9+ 8+" 842 +8 9+6 92D+." + !"B 24B"8 244 9+ 859""48 +D+ 9+ B" 2 !+. " 8 " 9+ " 9 2 3 +8 9+21 54+2 121+! 2 3 4+23 1+ 5 48 92D+ 3 81425+3 9+ 842 + 7 @+ 92D+ 9+ 7425A7"2!3 8 44 @ 9 8 2 3 3" 7 +346 @ 44 5" + "" 92D+ 9+ 842 + 3 8211+2!+3 " 59 + 46 7+52 8+" " +6+8 !2 7 7+52 8+ @28 8"" 3 ! 6 92 36 2 3 " 86 9 4+ 9+!+ 52 7+ "" 3" 7 92 "!" 9+ 82A+" 25 6 " D 8 " @"!38 @! + 7425A " 2 @9 + 8 ! 25+ 92D+ 9+ 23D2 2.+ 8 8 " 7+ "!." + 92 9+ 42!.+ @9 + 8 ! 25+ +JC 1"8+3 "" 9+ +6+ 8 4A+46 "" 8 B 42 + 9+!+ 2 3 46 "D+!2 42!.+ +43 "!+48+ "" 2 . + 9+ 5 4 2!6 B 854+8 " 9+ +6+ 8 + "! 8 "" 255" BC B"32 + "" 9+ +43 " D 8 " 2A . 2 244 B26 7+ 42 3 3"@ 92 9+ 7425A7"2!3 @9+ B23+" " 1!"1+!B2 +! 24 1!"1+!46 5"4"!+3 1!"1+!46 1425+3 @ 9 !+ +!+ 5+ "4 .9 2 3 9+ 5" D+ + 5+" 9+ 1 1 48 2 3 @9+ 8+3 2 4+. B2 + @26 3"+8 " " +! 2 8+! " 8 B+ 25+ "" 9+ +6+8 " " !1 1 48 0 (. %;. "? 2 M2G +28" 2746 ."" 3 7425A7"2!38 52 7+ B23+ 76 9"!" .946 B J .@ 9 5+B+ 1428 +! 2 3 44 7425A 5"4"! .B2 +! D+!6 84 .9 46 .+3 @ 9 32!A .!++ 2 3 9+ 81!+23 .9+ B J !+" 9+ 42 98 52!+ 446 8"" 28 "" .+ 2 4+D+4 +D+ 8 !C 25+ 5" 8 ! 5 .9 8 "!B" " 7425AC 7"2!3 @9 59 8 " + " 9+ 59+21+8 9+ 7+8 " " 5+B+ " .9 "" 7+ 8+3 2 3 8"" 9"!" .946 B J+3 @ 9 9+ 5"4"! .B2 +! 92 @" 43 B2A+ 9+ 5"4"!" "!B 2 3 +D+ 8 7+8 248"" "" 8+ B+ 24 42 9 28 + +3 !B46 " 2 8"4 3 89+2 9 ." " 4 B7+! + "!+ 2114 6 .9+ 5+B+ 9+ 89+2 9 .89" 43 7+ A+1 84 .9 46 32B1 "!2 4+28 924 2 326 "!3+! 92 9+ 32B1 +88 !"B 9+ @+ 1428 +! @" 43 " 52 8+ 2 8 33+ +J12 8 " " 9+ 7"2!38 2 3 9+ 5+ 92D+ 2 + 3+ 56 "" 5!25A 9+ 1428 +!7+ "!+ 8 9"!" .946 8+ 6 92D .9+ 7"2!38 " 9+ 89+2 9 .84 .9 46 +J12 3+3 7+ "!+ 9+ 1428 +! 8 2114 +3 9+ 89! A2.+ 5"B+8 84"@46 2 3 + 38 "" 1!+D+ 9+ 1!+B2 !+ 8+ ." " 9+ 1428 +!2 3 248"" 52 8+8 9+ 1428 +!"54 ." 9+ @""3 28 @+44 28 "" 9+ B+ 24 42 9 425A7"2!38 8"" 5" 8 ! 5 +3 2(+ B"!+ 8"4 3 !B+!2 3 4+88 " 86 92 @9+ 42 3 " @""3+ 42 9 2!+ @ 44 7+ ++3+3 9"@+D+! "" B2A+ 8 !+ 92 9+ 8 ! 25+ " 9+ 7"2!3 @ 44 7+ + 9+!" ""8B"" 9 "!" ""!.9 / 9+ 23D2 2.+8 " 9 8 A 3 " 2 7425A7"2!3 2!+ 8 5"B12!2 D+ 59+21 +88 8 "11"! 6 "!1!"1+!5"4"! . 8 !+236 23- 8 B+ " 9+ 7 43 . 2 3 9+ !+23 +88 @ 9 @9 59 9+ B2 +! 24 B26 7+ "7 2 +3 9+ 3 823D2 2.+8 2!+ 9+ 278"!1 " " B" 8 !+ !"B @! 9 "!" @ 9" 9+ + 3+ 56 "+ 7+5"B+ " 46 !"B 5" 25 @ 9 9+ 92 38 " 9+ 59 43!+ 9+ 4 27 4 6 "+ 5!25A "!59 1 9+ 3 5 4 6 " .+ C .2 8 ! 25+ @9 59 @ 44 2A+ 9+ 5924A !+23 46 +D+ 46 7 " @28 + 446 2 3 9+ B"!+ "!4+88 +D 274+ 24 +!2 " 9+ 5"4"!" " 9+ 7"2!3 9!" .9 @289 .8 2 3 +D+ 8+ M&G +5+ 6+2!8 92D+ 8++ 9+!21 3 3+D+4"1C B+ " " 8"E5244+3 964"142 + 7425A7"2!38 2 3 9+8+ @9+ 9"!" .946 B23+ 8+!D+ 9+ ! 1 !C 1"8+ "!2 B+ 82 8 25 "! 46 .+ +!24 9 8 8 64+ " 7425A7"2!3 8 5" 8 ! 5 +3 " 8+D+!24 426+!8 " 9+2D6 81+5 2446 1!+12!+3 121+! 8"" 28 + +3 2 3 1!+88+3 ".+ 9+!28 "" B2A+ 2 8"4 3 S 7"2!3 T @9 59 52 7+ 5 "" 8 9+ ++38 2 3 !+R !+B+ 8 " 2 6 859""4!""B 9+" 8 3+426+!8 "!" 8"B+ 528+8 "" 2 .!+2 +! 3+1 9 2!+ 5"4"!+3 9"!" .946 2 3 +D+ 46 "" 8 !+R !+B+ 8 9+ 23D2 2.+8 " 9 8 8 64+ " 7425A7"2!38 2!+ 9+8+ 9+!+ 2!+ "" -" 8 9+ 8 ! 25+ 8 +D+ 9+6 2!+ +28 46 23C - 8 +3 9+6 2!+ +B1"!2! 46 +J1+ 8 D+ 2!+ " +28 46 7!"A+ 2 3 2A+ 9+ 5924A 2 !46 @+ 9+ 3 823D2 2.+8 .+ +!24 2!+ 9+8+ 9+6 2!+ 4 A+46 "" 278"!7 B" 8 !+ !"B 9+ @2448 +81+5 2446 1425+3 54"8+ "" 7! 5A @2448 2 3 9+!+ "!+ "" 7 5A4+ "!@2!1 2 3 3!2@ 2@26 1425+8 !"B 9+ 725A .F 9+6 " +@+2! C +D+ 46F 9+6 2!+ B"8 !+R + 46 " 86F 9+6 278"!7 " 4 2 3 3 ! !"B 9+ 92 38 +81+5 2446 2 +! 8+ 928 !+ 3+!+3 9+B 1+!D " 8F 9+6 " + !+ 4+5 9 .9 4 .9 8 @9+ 54+2 2 3 2!+ !2 9+!+28 46 - !+3 76 @289 .8 @ 9 2 @+ 81" .+ "! !2. 9+6 2!+ " 1+!B2 + 2 3 9+!+ "!+ 9+4" .! 2!+ 1+!9218 B"!+ +JC 1+ 8 D+ 92 B"8 "!B8 " 7425A7"2!38 M5G 42 + 7425A7"2!38 28 3 52 +3 27"D+ 92D+ 7++ 8+3 9 8 5" !6 8 5+ 9+ +2!46 12! " 9+ 428 5+ !6 7 +J1+ 8 D+ +88 2 3 9+ 3 5 4 6 " . .+ 274+ 8 8 5 + 46 42!.+ 2 3 1!"1+!46 8+ 1!+D+ +3 9+ 8+" 9 8 B2 +! 24 !"B 7+5"B .2 244 5"B B" 4 5"B12!2 D+46 !+5+ 6+2!8 9+ "44"@ .2!+ 9+ 23D2 2.+8 " 842 + "! 7425A7"2!38 928 .+ +!24 2 3 44 7425A 5"4"! !+ 4+5 8 "" 9 .9 4 .9 8 "!2 4+28 " " 2 6 !" 74+8"B+ 3+.!++ @ 44 428 3+ +46 2A+8 9+ 5924A +28 46 2 3 6+ 812! .46 .D+8 2 !+. 42!2 3 54+2!B2!A !"B 9+ 5!26" 3"+8 " 278"!7 B" 8 !+ !+23 46 52 7+ 8+ 8"4 346 2 3 !B46 8 " - !+3 76 @289 .8 "! 85! 7C 7 .8 2 3 8 " " 86 @9+ 1!"1+!46 8+ 9+ 3 823D2 2.+8 2!+ 9+8+ 8 +J1+ 8 D+ @9+ 9+ 24 5"8 8 5" 8 3+!+3 7 " 8 1+!B2 + 56 8 2A+ "" 255" F " 42!.+ @2448 9+!+ 2!+ " + ! 74+8"B+ -" 8 "@ ." "" 9+ B1"88 7 4 6 " +5" "B 52446 "7C 2 .2 3 92 34 .84278 " 9+ !+R !+3 4+ .9 2 3 @ 3 9F 9+ 5+ 4" .7425A7"2!38 B 8 7+ B23+" 8+D+!24 84278 8+ ".+ 9+!F 8 " 24@268 +286 "" .+ 84278 " 3+ 524 5"4"!

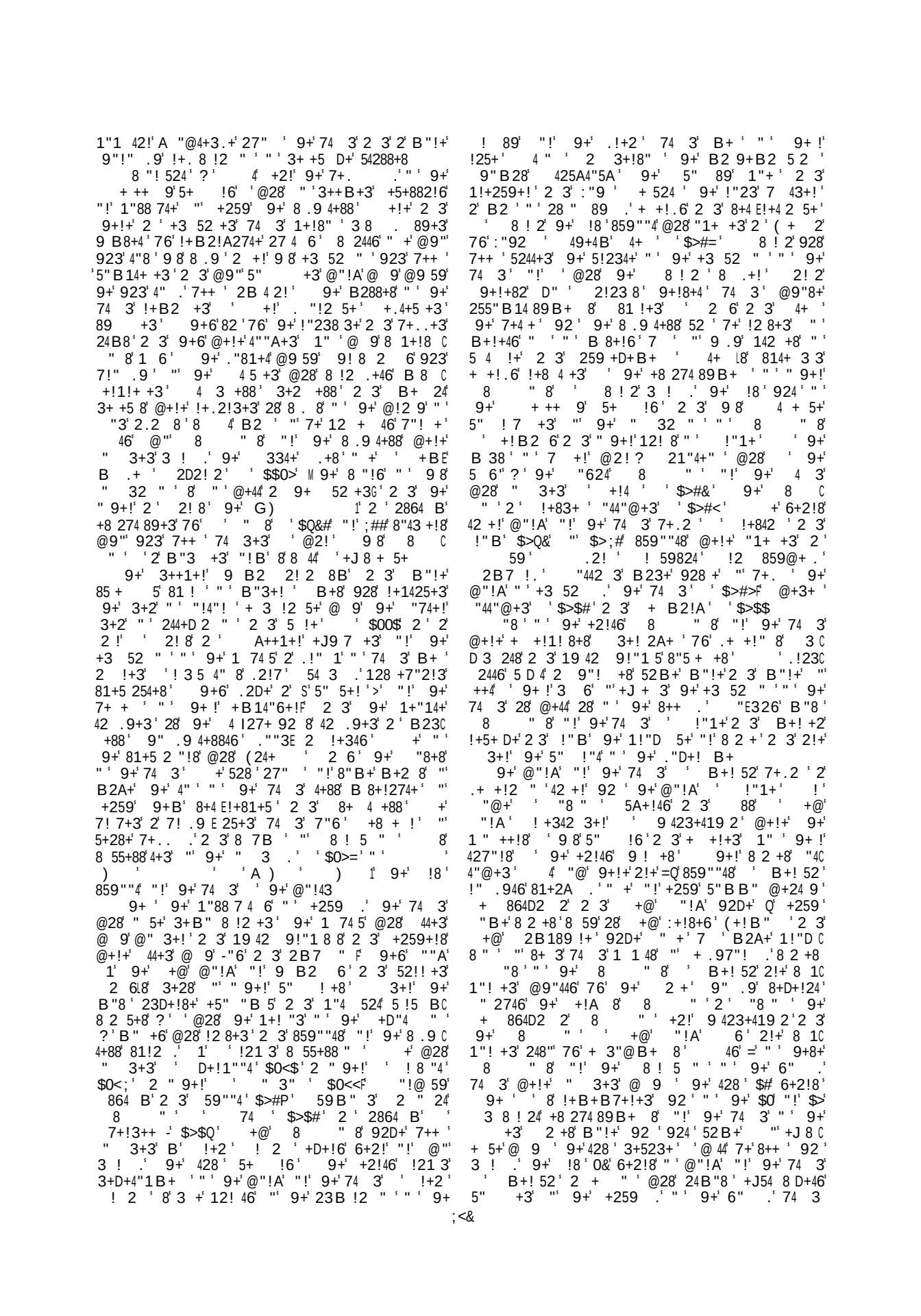
"@ .' "' 9+' D2! 2 " 8' ' 9+' 3 +!+ '426+!8' 2 3' +D+ ' '3 +!+ '12! 8 " ' 9+'82B+'8 !2 B!' ' ' B+'@ 4' 278"!7'+ " .9' " 4' !"B' 9+'92 38' " ' 9+' 59 43!+ ' "' !+ 3+!' '8"B+@92 'D2! 274+' ' 8' !+ 4+5 " ' " ' 9+' 4 .9 ' 2 3' 9+' !+23 +88' @ 9' @9 59' ' @ 4' 5 ' 9+' 5!26" !' ' 8' !+C R + 46' 2' D+!6' 3 5 4 ' B2 +!' "' .+ ' 9+' +J25 ' 8923+' " ' 5"4"! .' '842 +' B "8 ' 8 274+' "' 9+' 96. + 5' !+R !+B+ 8' " ' D 8 " !' '8' !2 9+!' 3 5 4 ' "' 8+ '8"' 92 ' 9+' -" 8' @ 4' '54"8+46' 2 3' +D+ 46 ' 2 3' !+B2 ' 8" ' 28' 9+' 7 43 .' 8+ 4+8' 2 3' 89! A8' "' 8' 1+!B2 + ' "!B 4' ' 8' "!' .+ +!24' 5" 3 " 8' " +' " ' 9+' B "8 ' 82 8 25 "!6' B2 +! 248' "' 8+' ' 9+' 5" C 8 ! 5 " ' " ' 7425A7"2!38 ' 2 3' 859""4' 7"2!38' !2!+46' B23+' 2' B 8 2A+' @9+ '8 114; .' ' 8' 3" 7 4+88' "' +J2..+!2 " ' "' 826' 92 ' ' 8' 9+' 7+8 ' B2 +! 24' "@' .+ +!2446' 2D2 4274+' 2 3' 89" 43' 7+' 8+3' "!' 244' 7! 5A ' 8 " +' "!' 5" 5!+ +' 7 43 .8 ' "!' ' 9+'4" .' ! ' ' @ 4' 1!"D+'4+28 ' +J1+ 8 D+' 2 3' B "8 ' 82 8 25 "!6 M3G' 4288' 7425A7"2!38' @+!+' !"3 5+3' "' .42 3' 2' 3+523+' "!' @"' 2." ' 2 3' " ' 9+' @9"4+' 2!+' 1!"D .' D+!6' 82 8 25 "!6 ' 8' 9+8+' 2!+' 28' 6+ ' !2!+46' " 3' ' " !' 5" !6 ' ' 8++B8' @+44' "' +J142 ' 7! + 46' 9"@' 9+6' 2!+' B23+' 28' @+44' 28' "' 8+ ' "! 9' 9+ !' 23D2 2.+8' 2 3' 3+ +5 8 ' 9+' .4288 ' @9 59' 928' 7++ ' 5 ' "' 89++ 8' "' 8 ' 9+' 81+5 5' !+R !+B+ 8' " ' 9+' 8 ! 25+' 8+ ' 212! ' "!' 9+' 7425A7"2!38 ' 8' .!" 3' " ' " +' 8 3+'+D+ 46 ' 7 '4 .9 46 '8"' 92 ' 8' !2 84 5+ ' 2 3' 6+ ' 28' 8B"" 9' 28' 1"88 74+' ' 8' +5+882!6' "!' 9 8' .! 3 .' "' 7+' 3" +' 52!+ 446 ' " 9+!@ 8+' 9+' 8 ! 25+' @ 4' 7+' "" !" .9 ' "!' @ 4' " ' 2A+' 9+' 5924A' +D+ 46 ' 2 3' 9+ 5+' !+ 3+!' 9+' @! .' D2! 274+' 2 3' !" 74+8"B+' 9 8' .!" 3' 8 ! 25+' @9+ '5"!!+5 46' 1!+12!+3' . D+8' "' 9+' .+!' 18' @9+ '1288+3' "D+!' ' "' .!+2 '8+ 8+' " '!" .9 +88 ' 7 '2' 8"! ' " '8B "" 4-'92!3 'D+4D+ 6' ++4 .' 9+' "11"8 +' "!' .!" 3' 8 3+' 8' 9+ '12 +3' 2' 3 4' 3+23' 7425A' "!' 2' 3 4' 7425A' 84 .9 46' .+3' @ 9' .!++ ' 9+ ' 9 8' 5"4"!' 8' 3!6' 9+' .4288' 8' 9+ ' !+236' "' 8+ ' 9+' .!" 3' 8 3+' 8' 9+' " 8 3+' @9 4+' 9+' 7425A' "!' 12 +3' 8 3+' 8' 8+ ' "' 9+' @244' +52 8+' " ' 9+' 25 ' 92 ' 9+' .4288' 8' !2 84 5+ ' 9+' 5"4"!' 89"@8' 9!" .9' !"B' 7+C 9 3' 2 3' 8++B8' "' 7+' 2' 12!' " ' 9+' .4288' 9+' .!" 3' 8 ! 25+' 5 8' 9+' 5!26" ' "!' 245' 8 C 5 + 46' @+44' "' 4+2D+' 2' 54+2!' +D+ ' B2!A' 2 3' 6+ ' ' 5"!!+5 46' .!" 3' 3"+8' " ' !+4+28+' 2 ' 3 +' 2B " ' " ' 5924A' 3 8 ' ' 9+' !""B ' 9+' 142 +8' " ' .4288' 2!+' 8 2446' 42!.+' 9+' +J1+ 8+' 8' 5!+28+3' 7 ' ' 3"+8' " ' 8++B' +5+882!6' "' B2A+' 9+B' /2 6' 42!.+!' 92 ' 9+' 84278' " ' 842 +' "!3 2! 46' 8+3' "!' @ 9' 9+' 1!"1+!' 52!+' ' 8+ .' 9+' -" 8' " ' 9+' .4288' 52 ' 7+' B23+' "' ' 8"' 54"8+46' 92 ' 9+6' 2!+' 852!5+46' " 5+274+ 5+' 9+' 12 +3' 8 3+' 8' @9"446' " ' " ' 5" C 25 ' @ 9' 3 ! 6' 92 38 ' 5!26" 8 ' +!28+!8' 2 3' 81" .+8 ' 9+' 5"4"!' " ' 9+' 7"2!3' !+B2 8' 1+!B2C + ' "!B ' 2 3' 3 8 !7+3' ' 2 6' @26 ' 2 !2446' 9+' .4288' " .9 ' "' 7+' 8+ ' 8"4 346' 2 3' +D+ 46' 2.2 8 ' 2' @+44E1!+12!+3' 725A' " ' @""3' "!' 5+B+ ' 8"' 92 ' 9+!+' 7+' "' . D .' "! 9"44"@' 8" 3' @9+ ' 9+' 5924A' 8' 8+3' 9+ '8"' 1!+12!+3' 9+6' . D+' "! 9' D+!6' 4 4+' " 8+' "5528 " ' "' 14+282 ' 85!2 596' 8+ 82 " 8' 2 3' 8++B' 24B"8 ' 3+24' 8 ! 25+8' "!' 7425A7"2!3' +J+!5 8+8 ' 9+' 23D2 2.+8' " ' .4288' 7425AC 7"2!38' 2!+' 9+' 5"4"!' 52 ' 7+' B23+' "' 8 ' 9+' B "8 ' +J25 .' 3+B2 38' " ' 9+' 96. + +' " ' D 8 " ' "' 9 .9' 4 .9 8' 2!+' 1"88 74+' !"B' 2 6' 12!' " ' 9+' !""B' 9+6' @ 4' " ' 278"!7' 9+' " 4' !"B' 1+!81 ! .' 92 38' 9+6' 2!+' B1+!D " 8' "' B" 8 !+' 2 3' 52 ' 7+' 8+ ' 2.2 8 ' " 8 3+' 7! 5A' @2448' ' 9+' 5" 3 " 8' 3+B2 3' ' 9+6' 2!+' +28 46' 2 3' 82 +46' 54+2 +3' 9+6' @ 4' 428 ' 3+ +46' 2 3' 8++B' "' .!"@' B "!+' 82 8 25 "!6' 9!" .9' 8+' "@ .' 3" 7 4+88' "' 9+' 25 ' 92 ' 9+' .!" 3' 8 !C 25+' 7+5" B+8' B "!+' +46' 2 3' +D+ 46' !" .9+ +3' 9+6' 2!+' " ' " 86 ' 2 3' 3 81426' 2' 142 ' "!B' B2!A' 9+6' @ 4' ' B+' 7+5" B+' +J1+ 8 D+' 2 3' 52 ' 7+' 23- 8 +3' "' 9+' @244' 8125+' 28' !+23 46' 28' 964"142 +' 9+' 3 823D2 2.+8' @9 59' @+!+' " 5+3' ' 9+' " 3" ' 859""48' @9+!+' 9+6' 2!+' 5" B B " 46' 8+3' 2!+' 9+8+' 9+' -" 8' 2J+' 84 .9 46' " 5+274+' ' 2 3' ' 9+6' 8+12!2 +' 2' 4 4+' .2 9+!' 5924A' 3 8 F 8" B+' +259+!8' " ' 2!' 542 B' 92 ' 9+6' 3"' " ' . D+' 2 ' S' 2! 8 5' 4 + T' 9+8+' "7-+5 " 8' 8++B' 5" B 12!2 D+46' 8 . C 52 ' @9+ ' 9+' B2 ' 8+' " ' 9+' 7425A7"2!3' 8' 2A+ ' "' 9+' 5" 8 3+!2 " ' 426 ' @9"' 3" 7 C 4+88' 923' 5" 8 3+!+3' 244' B2 +! 248' 52!+ 446 ' 8268 ' S 9+' 7+8 ' B2 +! 24' "!' 2' 7425AE7"2!3' 8' 1!"72746' !" .9+ +3' .4288' 5"4" !+3' 7425A' "!' 32!A' .!++ ' 2 ' 9+' 725A ' 9" .9' 9+' "7-+5 " ' "' 9 8' M.4288G' 8' 92 ' ' @+2!8' 2@26' 9+' 5924A' 8"' R 5A46' 92 ' ' 8' 3 5 4 ' "' A++1' 2' 1" ' "!' @! .T'Ü M ++' +4 J' 426 ' ' '% ' -) 15' 1 '<<' " 8 "!3 ' " 3" ' $<#Q G' ' 9+' ' (' ' '%) ' B23+' "' 9+' + 2 +' " ' 9+' +3' 2 +8' ' $<#>' !+42 D+' "' 5" 8"4 32 " ' " ' 859""48' ' 9+' 8 ! 5 ' " ' "4 B7 2 ' @+' 2!+' "43 ' S' 9+' 7425AE.4288' 7"2!3' 8' 9+' 3+24' 7"2!3 ' !+B2 .' 1+!B2 + 46' 7425A ' +D+!' ++3 .' !+12 ! ' 2 3' 7+ .' 1!25 C 52446' 3+8 ! 5 74+' ' 8 ' 9"@+D+! ' +J !+B+46' +J1+ 8 D+ T' M ++' 1 ' Q& G ' 233 " ' "' 9+' A 38' " ' 7"2!38' 9+!+ 'B+ C " +3 ' 9+!+' 2!+' 2' B7+!' " ' 12 + +3' 5" B1"8 C " ' B "8 46' B23+' " ' 121+!' "!' 1 41' 5" B1!+88+3' 2 3' 5"2 +3' @ 9' 8"E5244+3' 4 R 3' 842 .' 9+6' 2!+' !2 9+!' +J1+ 8 D+' 2 3' " ' +!' @2448' !++' !"B' B" 8 !+' 9+6' 8+!D+' D+!6' @+44' "!' 2' B7+!' " '6+2!8 ' ' 9+6' @ 4' " ' 8 2 3' B 59' @289 .' 2 3' @ 4' ' B+' 7 5A4+' 2 3' @2!1' 2 3' 4"8+' 9+ !' 5"4"! $ ' (' - %;. "? ' 2 !2446' 7425AC 7"2!38' " .9 ' "' 7+' 4"52 +3' @9+!+' 9+' 1 1 48' @ 4' 92D+' !+236' 255+88' "' 9+B ' @9+!+' 9+6' 52 ' 7+' 8++ ' +28 46' !"B' 9+' 3+8A8 ' 2 3' @9+!+' 9+6' @ 4' !+5+ D+' 14+ 6' " ' 4 .9 ' 9' 42 +!)' 4 .9 .' 9+' +259+!L8' 7"2!3' 89" 43' 7+' 2 ' 9+' !" ' + 3' " ' 9+' !""B' @ 9' 1!+ +!+ 5+' . D+ ' "' 9+' 5+ +!' 2 3' ! .9 ' 924 ' 28' 9+' 59 43!+ ' 8 ' 2 ' 9+ !' 8+2 8 ' 9 8' 7"2!3' 89" 43' 7+' 9 .9+!' !"B' 9+' 4""!' 92 ' 2 6' " 9+!' 7"2!3' ' 91' !""B ' ' "!3+!' 92 ' @92 +D+!' B 26' 7+' 1425+3' 9+!+" ' 52 ' 7+' !+23' +28 46' !"B' 244' 12! 8' " ' 9+' !""B

9+ 7" "B " 9+ +259+!L8 7"2!3 89" 43 7+ = ++ !"B 9+ 4""!2 3 9+@ 3 9" 9+7"2!3 89" 43 7+2 4+28 ;+ ++ 9+7" "B 12! "2 +259+!L8 7"2!3 8+ 4"@+! 92 9 8 8 !2!+46 +D+! 8+3 2 3 9+ 11+! 12! 9 .9+! 92 0 ++ 27"D+ 9+ 4""! 8 8 2446" 9+2D+!2.+ +259+! 2 3 9+!+ "!+ 8+43"B 8+3 9+ 7425A7"2!38 +81+5 2446 3+8 . +3 "! 9+ 8+" 9+ 1 1 48 89" 43 7+ 1425+3 9+ @244 "11"8 + 9+ @ 3"@8 2 3 248"" 9+ @244 9+ !+2! + 3 " 9+ !""B 44 9+ 2D2 4274+ 8125+" 9+ 1!"1+! 9+ .9 " 9+8+ @2448 89" 43 7+ 8+3 "! 7425A7"2!38 !""B8 3+8 . +3 "! 9+ 59 43!+ " 9+ 1! B2!6 .!23+8 M !"B .!23+ " 54 8 D+G 9+ 7" "B " 9+ 7425A7"2!3 89" 43 7+ 8+ Q& 59+8 27"D+ 9+ 4""! 2 3 9+@ 3 9 9+7"2!3 !"B 7" "B "1 89" 43 7+ ;# 59+8 9+!""B8 3+8 . +3 255"B B"32 + 59 43!+ " 9+ +!C B+3 2 +.!23+8 M (" (54 8 D+G 9+ 7" "B " 9+ 7425A7"2!3 89" 43 7+ ;# 59+8 !"B 9+ 4""! 2 3 9+H@ 3 9 9+7"2!3 !"B 7" "B "1 89" 43 7+ ;& 59+8 !""B8 3+8 . +3 "! 59 43!+ " 9+8+D+ 9 2 3+ .9 9 .!23+8 2 3 9 .9 859""4 .!23+8 8 7+8 8+ 9+ 7"2!3 ;++ 27"D+ 9+ 4""! 2 3 B2A+ ;+ ++ & 59+8 @ 3+ !"B 7" "B "1 @ 44 7+ @+44 "! 859""4 2 9"! +8 8 92 9+ !7 43+!8 "44"@ 9+8+ . !+8 54"8+46 "! 76 8" 3" .9+ +J1+ 8+ 7425A7"2!38 @ 44 7+ 3 B 89+3 4+88 4 .9 E278"!7 .8 ! 25+ @ 44 7+ !"3 5+3 2 3 7+8 244 7425A7"2!38 @ 44 7+8 2 +3 @ 9 9+!+286 2 3 "!B24 !+259 9+59 43!+ 9+!+ 2!+ B2 6 859""4 7 43 .8 " !5" !6 @9 59 9+6 2!+ 8+ 8" 9 .9 27"D+ 9+ 4""! 92 9+59 43!+ " 9+1! B2!6 .!23+8 52 "!+259 9+B 4+88 9+6 8 2 3 " 7+ 59+8 2 3 9+!+ 2!+ 2 B 4 3+ " 9+!8 @9 59 9+7"2!38 2!+ 8+ 8" 9 .9 28 !+ 3+! 9+ 11+! 924 8+4+88 7+52 8+ " !+259 " 9+ 1 1 48 9+ @" 11+! .!23+8 2 3 9+9 .9 859""4 9+!+ 2!+ .!+2 +!3 +!+ 5+8 9+ 9+ .9 " 9+59 43!+ 2 3 9+!+ "!+ 244 52 " 7+ 8" +D+ 46 23- 8 +3 " 9+ 7425A7"2!3 28 9+ 4"@+! .!23+8 9 .9 859""4 9+ 7"68 2!+ " + B 59 244+! 92 9+ .!48 2 3 9+ 5+ 9+!+ B 8 7+ B "!+ !"B " "!23- 8 B+ 92 9+ 4"@+! .!23+8 924A !268 8" 1425+3 28 " 52 59 244 9+ 5924A 3 8 2 3 " 9"43 9+ 5!26" 8 2 3 +!28+!8 89" 43 7+ 28 + +3 B B+3 2 +46 7+ +2 9 9+ 7425A7"2!38 9+8+ !268 89" 33 7+ !" 3+3 " 9+ 8 3+ 2 3 " F 8 3+ " B2A+ +286 " 5"44+5 2 3 !+B "D+ 9+ 5924A 3 8 2 3 2 6 " 9+! 3 ! 255 B 42 .9+!+ F " 8 3+ " .+ ! 3 " 892!-DE5"! +!+3 1!"-+5 " 8 9+ !""B 8 9+41 4 " 8+ 2 @ !+ 85!++ 9+ 5924A !" .9 8" 28 " 1!+D+ 9+ 5!26" 8 2 3 9+ +!28+!8 !"B 5"B .5" 25 @ 9 9+ 3 8 @9 59 928 244+ !"B 9+ 7"2!3 9 8 @ !+ B 8 7+ 8+ 8 5 + 46 7+4"@ 9+ 4+D+4 " 9 8 !" .9 " 1!+D+ +!28+!8 2 3 5!26" 8 !"B 244 ." 52 7+ 9 .+3 "!54281+3 " 9+ 8 3+8 8" 92 @ 44 " .+ @2!1+3 "!A "5A+3 " 2 3 6+ 7+ +28 46 !+B "D+3 @9+ +5+882!6 " 54+2 9+ 3 8 " 9+ !" .9 3+! " 5" 3 " "43 7 43 .8 "! +@ 89" 43 9+!+ +D+! 7+ 2 7425A7"2!3 7+ @++ @ 3"@8 28 8 B1"88 74+ "! +23 !"B 2 3 8 2 5+2 6 9 .@! + " 2 7"2!3 8" 1425+3) "? 425A7"2!38 92D+ 7+5"B+ 8" B 59 " 2 25 "! " !" B+ 9"38 " @"!A 92 @+ !+2446 @" 3+! 9"@ "43E B+ +259+!8 3 3 @ 9" 9+B 9+6 2!+ " " 46 D24 274+ 2 38 " !"B+ 9"38 "!1!+8+ .B2 6 8 7-+5 8 9+6 8+!D+ 28 2 8"5 24 I .2.+ " " 8B244 B"B+ 9+6 7! .9+ 3 D 3 24 1 1 4 2 3 9 8 @"!A 3 !+5 46 7+ "!+ 9+ @9"4+ 54288 8 B 42 +9 B "8+4 E3+1+ 3+ 5+2 3 ! 89 2 814+ 3 3 "11"! 6 "! 92 3+B"5!2 5 .D+E 2 3E 2A+ 5! 5 8B @9 59 9+ B 8 B++ !+24 4 + 9+6 82D+ 9+ +259+! B 59 B+2 3 ! 89 2 !+236 B+2 8 " . D .32 46 3! 44 2 3 32 46 +8 8 8 + !+46 82 + 826 92 B+! 52 +259+!8 2 3 1 1 48 .+ B"!+ 9+41 !"B 7425A7"2!3 @"!A 92 3" 9+ +259+!8 2 3 8 3+ 8 " 2 6 " 9+! 2 "

(E (? 5"+3 52 " 24 8 " "!.2 I+3 $>&=!E$>&P 523+B 5 5"44+12 + 2 3 B 8 524 3+12! B+ 8 2!+ B2 2 +3 3B 88 " " 9+5"44+.+ 8 76 5+! 52 + !"B 2 211!"D+3 9 .9 859""4 "! 76 +J2B 2 " !+R ! ." 27" $P 8 " 9 .9 859""4 @"!A +.!++8 2!+ 5" +!!+3 2! 8 19 4"8"196 2 3 85 + 5+ 9+!+ 2!+ 0 1!" +88"!8 " 9+ 25 4 6 24 +! + 8 44 !234+6 9 8 9+ 1!+8 C 3+

M$0Q;E$0>#G ?9+2 9"!" 9+ 2B" 8 928 2 5+! 2 B1"! 2 5+ 9+9 8 "!6" +3 52 " 28 " +@9" 8 !+ . 9+ +3 9+ 3! " 9+"!+ 524 "! 19 4"8"19 5 9" .9 9+3 !+5 " " 5"BC 1 48"!6 +3 52 " +@28 3++3 " + " 8 +2!4 +8 23D"52 +8 2 3 .2D+ +-F1!+88 " " 9 8 D +@8 7+ "!+ 9+ 82B+ 1"8 " @28 23"1 +3 76 32B B 9 2 3 :+!+B6 + 92B ! . " 9 8 7-+5 " 3 52 " # 1 ""A 59 $&G $0&P 9+ 8268 S 8 + 3"! # ! (1 28 4 + + L8 !2 842 " ;3 +3 $0$0F A (5 Q ; m $Q 1 ;O<G D+!6 @+ "78+!D+8 8 " +286 " B2. +"! 244"@ 92 2 12!+ 928 5" +!!+3 2 6 5" 8 3+!274+ 7+ + " 9 8 59 43 76 7! . .9 B " 9+ @"!43F 9+ 2 +!@2!38 + !+46 +.4+5 8 9 8 5 4 !+ 2 3 +3 52 " 2 3 8 +!8 9 B " .!"@ 1 4 A+ 2 B+!+ 7+28 " 4+23 2 4 + 8+4+88 " 9+!8 2 3 892B+ 4 " 9 B8+4 + 9+ B 5 124 42@8 " B"8 5" ! +8 8++B 3+ +5C D+ 9 8 1" 76 " 5" 8 !2 ." 5 E 12!+ " 7+8 "@ 2 1!"1+!+3 52 " 1" 9 8 59 43!+ +!9218 9+6 9" .9 1 89B+ + " .9 " 4+2D+ 9+ 12!+ @9" +.4+5 8 9+ 8 ! 5 " " 9 8 2B 46 " 427"!+ 3+! 9"8+ .! +8 2 3 5" D+ + 5+8 @9 59 9 8 2B 46 8" 8 ! 5 +3 @ 44 7+ 8 !+ " 7! ." 1"





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" 9+!5" !+8 ! 2 ! 2 9+ + 3+ 56 928 7++ " A++1 9+74 3 @9" 2!+ B"8 46 !"B 9+1""!+! 54288+8 9+!2 A8 " 9+ 4"@+!E.!23+ @"!AB2 2 3 .42 3 2 3 5" 42 3 92D+ 7++ !+B2!A2746 8 55+88 4 52!!6 ." 9+ 8+ 8 74+ 2 3 1!25 524 3+2 " 1!"D 3 ." B2 24 "55 12 " "! 28 B2 6 " 9+ 74 3 28 1"88 74+ +44+5 24 +3 C 52 " 928 " 4 !+5+ 46 7++ +JC + 3+3 " 8" B2 6 " 9+ 8 .9 4+88 !+2 ! 2 28 B+! 52 2 3 6+ 2 .+ +!2 " 2." "5" !6 9+@"!43@" 43 92D+ +R 24+3 9+ !+23 +88 @ 9 @9 59 9+ .4 89 1+"14+ !+5". I+3 2 3 1!"B" +3 "9 .9 1"8 " 8 59 2 74 3 B2 28 + !6 2@5+ @9" 7+52B+ 1"8 B28 +E.+ +!24 B+! 52 0 1!+D2C 4+ +3 52 " 24 3+24 928 7++ "!" +! "+D+!6C 7"36 2 5"B B" 859""4 +3 52 " 2 3 " ! 8 92 9+ 3 D 3 24 "44"@ .9 8 "@ 54 2C " 8 2 3 14 . " 1!25 524 @"!A @ 44 3 9+@"!A 8+4 9+81+5 24 !2 . ++3+3 "!1!+12!+ 9 B "! 7+. . "!1!"D 3+ !23+8 859""48 +D+ "! 9+ 8++ . 8 " 46 - 8 7+ . B23+ +@ 8 2 +8 92D+ 5"!!+42 +3 2 3 +3 9+ +3 52 " " 9+ 8++ . " 2 + +5 D+/868 +B 3+!2 6 868 +B 8 28 .+ +!" 8 2 3 !++E "!E244 28 9+ B+! 52 9+ 8++ .1+!8" @ 44 3 9 B8+4 @9+!+28 9+ 74 3 B2 8 4+ . 3+3 4B"8 2 6 B+! C 52 74 3 59 43 52 ." 2 859""4 2 3 4+2! .+"B+ !6 2 3 2 @ 9 " ! =# 859""48 "! 9+ 74 3 @+ 92D+ " 46 2 85"!+ " 3 8 ! 24 +8 274 89B+ 8 " @9 59 " 46 $# 2!+ 8 2 + 8 C " 8 "! !+5+ D+ 8 2 + 2 3 9+B 27" &### B+ 2 3 @"B+ 2!+ +B14"6+3 !+2 ! 2 @9 59 928 924 9+ 1"1 42 " 2 3 8" 27" 924 9+ B7+!" 74 3 " 9 8 5" !6 9+!+ 2!+ P# @"!A89"18 +B14"6 .8"B+ Q### B+ 2 3 @"B+ @+4D+ " 9+ 8 2 + 859""48 B+! 52 2!+ 5"B7 +3 8 " 8 "! 9+ 3+2 2 3 9+74 3 ? 2 5"B7 2 " @9 59 8 723 "!7" 9 54288+8 8 2 @9"4+ 9+@"!A "! 9+ 74 3 B+! 52 8 .+ +!" 8 + +!.+ 5 2 3 3 8C "!3+!46 2 3 6+ 8+D+!24 " 9+859""48 2A+ 76 9+B8+4D+8 2!+@" 3+! 446 + 92 2 !+5+ @! +! 8268 27" 9+@"!A 3" + "! 9+ 3+2 76 S 9+!+5+1 D+2 3 9"!" .9 B+! 52 T 8 ! + " 9+@"!A "! 9+74 30 9+74 3 1+!8" S 8 7+ . +J1+! B+ +3 @ 9 " 2 5"4"8824 8524+ "!+ B" +6 8 7+ . 81+ " 9 B 92 2 6 " 9+!5" !6 9+ @"!43 2 3 24 9" .9 " 9+ 89"! +8 "! 9+ 59+21+8 "! 2 6 8+ 8+ 9+7+8 @26 9 8 8 " +@26 " .+ .2 9+ ! 9 ?2 3 9+ B+! 52 8 @ 44 .+ 2 9+ ! 9 @92 +D+! 5"8 8 T 6 5"B12! 8" " 9+@"!A 3" + 9+ D2! " 8 5" ! +8 7+5"B+8 ! + +D+ 28 8 @! + D+!6 5" !6 8 !6 ." 3 " @92 " 9+! 5" ! +8 2!+ 3" .2 3 " B1"! 9+ 7+8 3 8 ! 24 +3 52 " "! 9+ 74 3 2 3 " 9+! 868 +B2 5 + "! " 1!+12!+ 9+74 3 " 2A+ 9+ ! ! .9 4 1425+8 9+ 8"5 24 859+B+ 8 23D2 5 .!21 346 B+! 52 +D+!24 8 2 +8 92D+!+5+ 46 5!+2 +3 5"B B 88 " 8 2 3 D"4 C ++! 288"5 2 " 8 2!+ 7+ ."!B+3 B2 6 5 +8 9" .9 9+ +@ @"!A 3"+8 " 24@268 B+!.+ +5" "B 52446 2 3 V@ 9" ! 5 " " 9+@"!A 92 8 24!+236 +8 274 89+3 2 3 !2C 3 " 24 244 8 !+2B8 " +3 52 " 2 3 + +!1! 8+ 7+924 " 9+74 3 B 8 B+ 3 9+ ! 7+38 +2 3 4"@ 5!+28 .46 ".+ 9+! +8 3+8 9+@+24 9 2 3 + +!.6 7!" .9 7+2! " 9+ 74 3 28 1"88 74+ +44+5 24 +3 C 52 " 928 " 4 !+5+ 46 7++ +JC + 3+3 " 8" B2 6 " 9+ 8 .9 4+88 !+2 ! 2 28 B+! 52 2 3 6+ 2 .+ +!2 " 2." 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C 52 74 3 59 43 52 ." 2 859""4 2 3 4+2! .+"B+ !6 2 3 2 @ 9 " ! =# 859""48 "! 9+ 74 3 @+ 92D+ " 46 2 85"!+ " 3 8 ! 24 +8 274 89B+ 8 " @9 59 " 46 $# 2!+ 8 2 + 8 C " 8 "! !+5+ D+ 8 2 + 2 3 9+B 27" &### B+ 2 3 @"B+ 2!+ +B14"6+3 !+2 ! 2 @9 59 928 924 9+ 1"1 42 " 2 3 8" 27" 924 9+ B7+!" 74 3 " 9 8 5" !6 9+!+ 2!+ P# @"!A89"18 +B14"6 .8"B+ Q### B+ 2 3 @"B+ @+4D+ " 9+ 8 2 + 859""48 B+! 52 2!+ 5"B7 +3 8 " 8 "! 9+ 3+2 2 3 9+74 3 ? 2 5"B7 2 " @9 59 8 723 "!7" 9 54288+8 8 2 @9"4+ 9+@"!A "! 9+ 74 3 B+! 52 8 .+ +!" 8 + +!.+ 5 2 3 3 8C "!3+!46 2 3 6+ 8+D+!24 " 9+859""48 2A+ 76 9+B8+4D+8 2!+@" 3+! 446 + 92 2 !+5+ @! +! 8268 27" 9+@"!A 3" + "! 9+ 3+2 76 S 9+!+5+1 D+2 3 9"!" .9 B+! 52 T 8 ! + " 9+@"!A "! 9+74 30 9+74 3 1+!8" S 8 7+ . +J1+! B+ +3 @ 9 " 2 5"4"8824 8524+ "!+ B" +6 8 7+ . 81+ " 9 B 92 2 6 " 9+!5" !6 9+ @"!43 2 3 24 9" .9 " 9+ 89"! +8 "! 9+ 59+21+8 "! 2 6 8+ 8+ 9+7+8 @26 9 8 8 " +@26 " .+ .2 9+ ! 9 ?2 3 9+ B+! 52 8 @ 44 .+ 2 9+ ! 9 @92 +D+! 5"8 8 T 6 5"B12! 8" " 9+@"!A 3" + 9+ D2! " 8 5" ! +8 7+5"B+8 ! + +D+ 28 8 @! + D+!6 5" !6 8 !6 ." 3 " @92 " 9+! 5" ! +8 2!+ 3" .2 3 " B1"! 9+ 7+8 3 8 ! 24 +3 52 " "! 9+ 74 3 2 3 " 9+! 868 +B2 5 + "! " 1!+12!+ 9+74 3 " 2A+ 9+ ! ! .9 4 1425+8 9+ 8"5 24 859+B+ 8 23D2 5 .!21 346 B+! 52 +D+!24 8 2 +8 92D+ !

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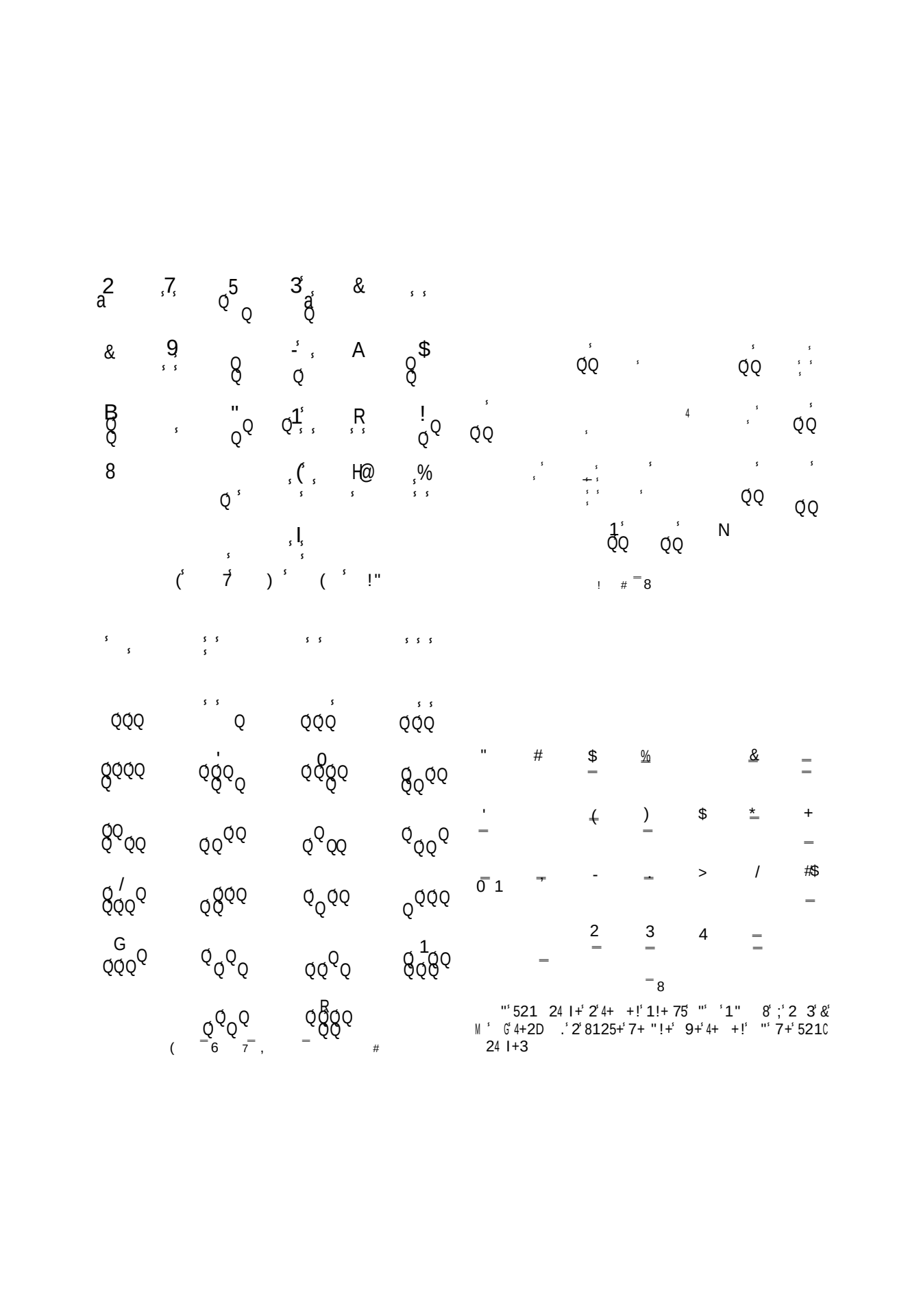
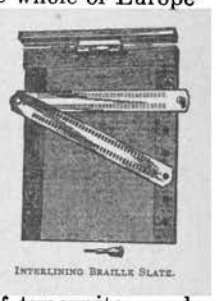


Vienna. Some German schools have a kindergarten department. In America there are 2 kindergartens, one in Boston, connected with the Perkins Institution, and the other a department, in a separate building, of the Pennsylvania Institution. The functions of these nurseries and kindergartens are (1) to furnish the blind child with many ideas and experiences that come to the normal child without special instruction, (2) to correct the evils that result from his being coddled at home, (3) to conquer nervous habits and avert their bad effects, (4) to sharpen and train hearing and touch, (5) to strengthen the body by means of exercise.

Curricula and Apparatus. — The curricula of the ordinary institutions for the young blind are about the same as those of the common schools for the seeing, — reading, writing, arithmetic, geography, history, etc. The chief difference in method lies in the apparatus, and is at once suggested by a study of the apparatus itself.

The first embossed book for the blind was printed at the Paris Institution in 1786. The early books were expensive, not easy to read, and were used chiefly for exhibition purposes. The type was a form of Roman letter. Many persons experimented with variations of our common letters and arbitrary arrangements of lines and curves. In 1836 about twenty line alphabets were submitted to the Society of Arts for Scotland. That by James Gall was chosen, and books were printed in it. The Boston line letter, later improved by Dr. Howe, persisted for long in America. But except for the very useful Moon type for the elderly blind and those whose fingers are insensitive, all line alphabets have been abandoned (the Perkins Institution only recently discontinued the printing of Roman line) in favor of point systems, braille and two variants of it.

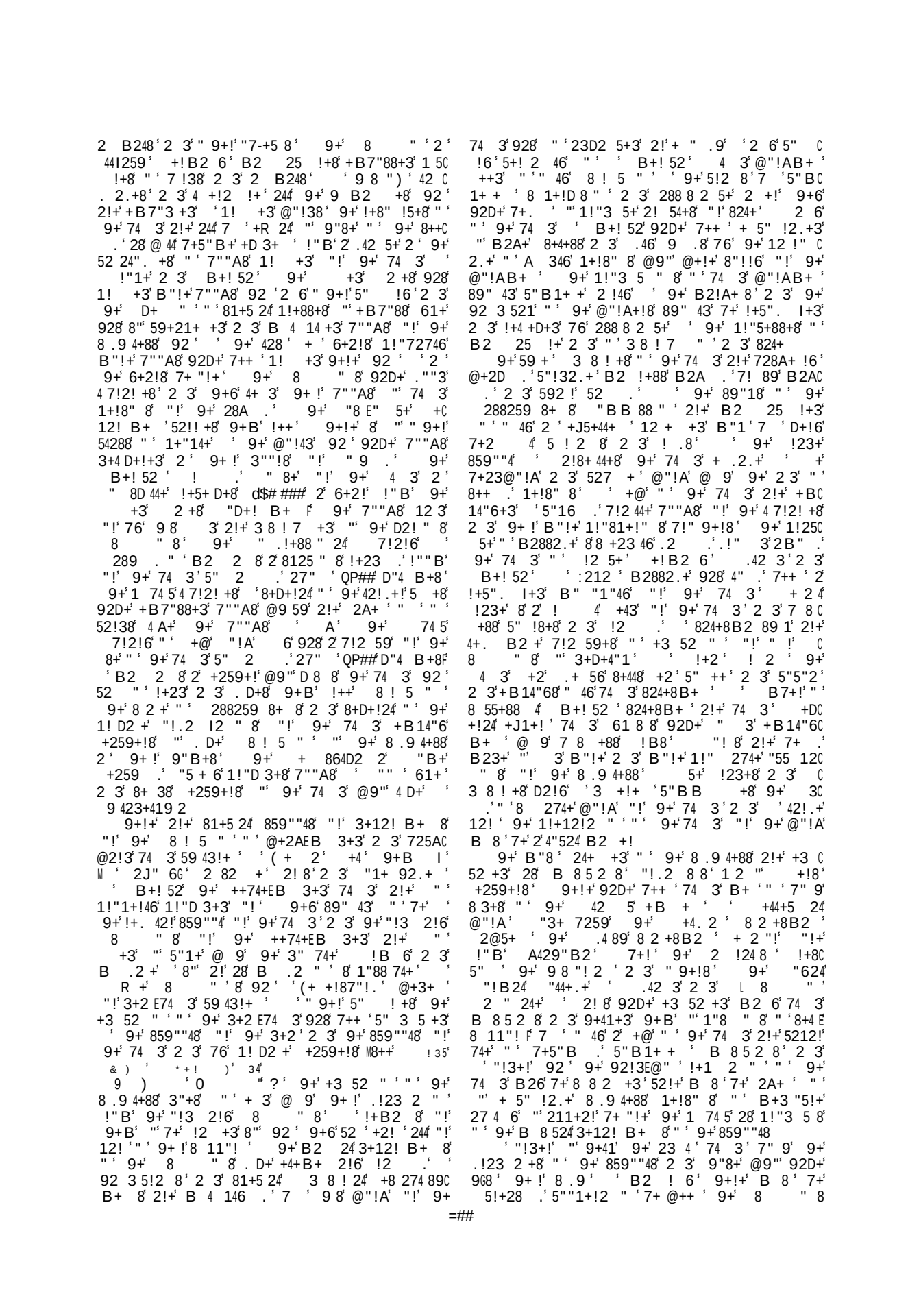
The base of braille is a cell of 6 points, thus ⁚⁚ The characters consist of various combinations of these 6 points. For instance, 3 points in a vertical line form the letter L. If the middle dot is struck out and another placed at the right of the lower dot, the letter is U, and so on. There are 62 characters. Each represents a letter, a punctuation mark, or a contraction standing for several letters. This point system was made by Louis Braille in 1825, and bears his name. It is used all over the world. American braille embodies some changes, not in the form of the letters, but in the assignment of the letters to the various combinations. The idea was that the letters which occur most frequently, such as E, O, R, S, T, should be made with the fewest dots. The changes do not alter the mechanical structure of the type any more than the mechanical structure of this ink type would be altered if it should be agreed to print *s* for *e* and *e* for *s*. New York point differs from braille in that the characters are not 3 points high and 2 wide, but 2 points high and 3 wide. It has no advantages, and some disadvantages as compared with braille. The variety of prints has caused some confusion and has resulted in reduplication of books. Some American institutions are provincial enough to cling to New York point when other American institutions and the whole of Europe use braille both for literature and for music. But any enterprising blind person who knows one print can easily learn another. The point systems can be written for notes, correspondence and manuscript books, on special writing machines and also by means of small hand frames and a stylus to indent the points. To write ink print the blind can use any kind of typewriter, and typewriting is taught in the best schools. The blind also write pencil script, and there are several ingenious devices to guide the pencil.



Interlining Braille Slate.

For arithmetic the best instrument is the brain, in which figures can be written on the memory and combined and erased with ease. There are several mechanical devices to assist the pupil. Ballu's calculator consists of a rectangular board divided by raised metal lines into equal squares. Each square is pierced with 9 holes. Each hole corresponds to a figure, and a pin in one of the holes indicates which figure that square stands for. A special pin gives zero in one position and 8 algebraic signs in the other positions. Taylor's frame is a metal plate filled with holes shaped like 8-pointed stars, the holes equidistant. A square peg, with a ridge on the side of one end, and 2 points on the side of the other end, will obviously take 16 positions in the octagonal hole, and so represent the 10 figures and the signs of multiplication, addition, etc. Some of the blind become rapid and accurate in mental calculations. The principles of geometry can be learned without visible or tangible diagrams. To assist the blind student there are several devices. One is a cushion with curved and straight wires, the ends of which are pointed and cling to the cushion. Construction lines can be drawn with strings and pins, and the points of the diagram can be lettered with pins, the heads of which form braille characters.

In studying geography the blind explore raised maps and globes with the land raised and the seas depressed, the rivers represented by fissures, the capital cities by large points, and the other cities by small points. If the globe is large enough, the names of the countries, seas, rivers, and cities are printed in embossed type. Dissected maps make a pleasant game and convey useful lessons. The physical sciences are taught the blind by laboratory methods, with the same models and apparatus that are used by the seeing. Manikins that can be taken apart are used to teach anatomy. Some of the institutions have museums of stuffed birds,



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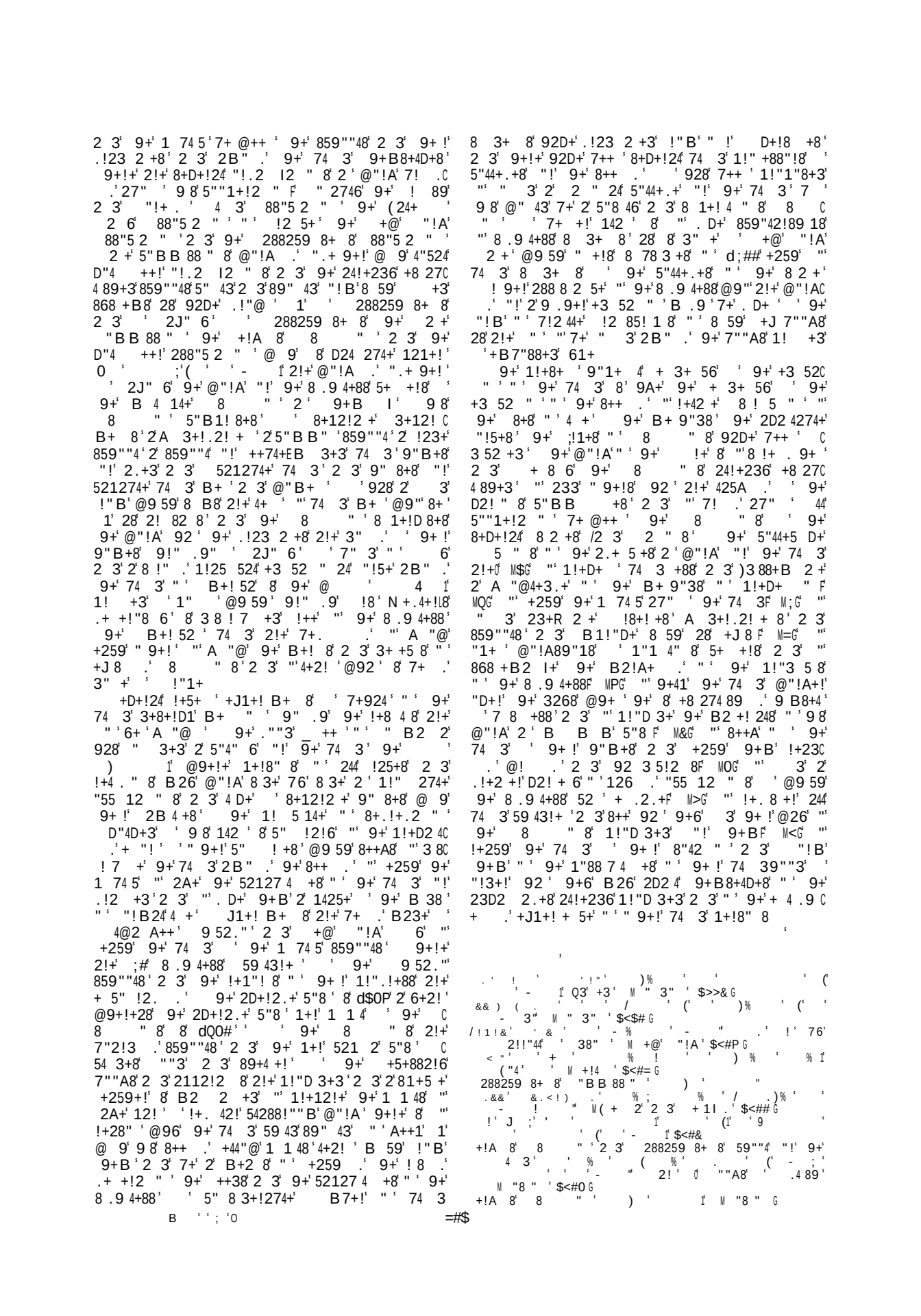

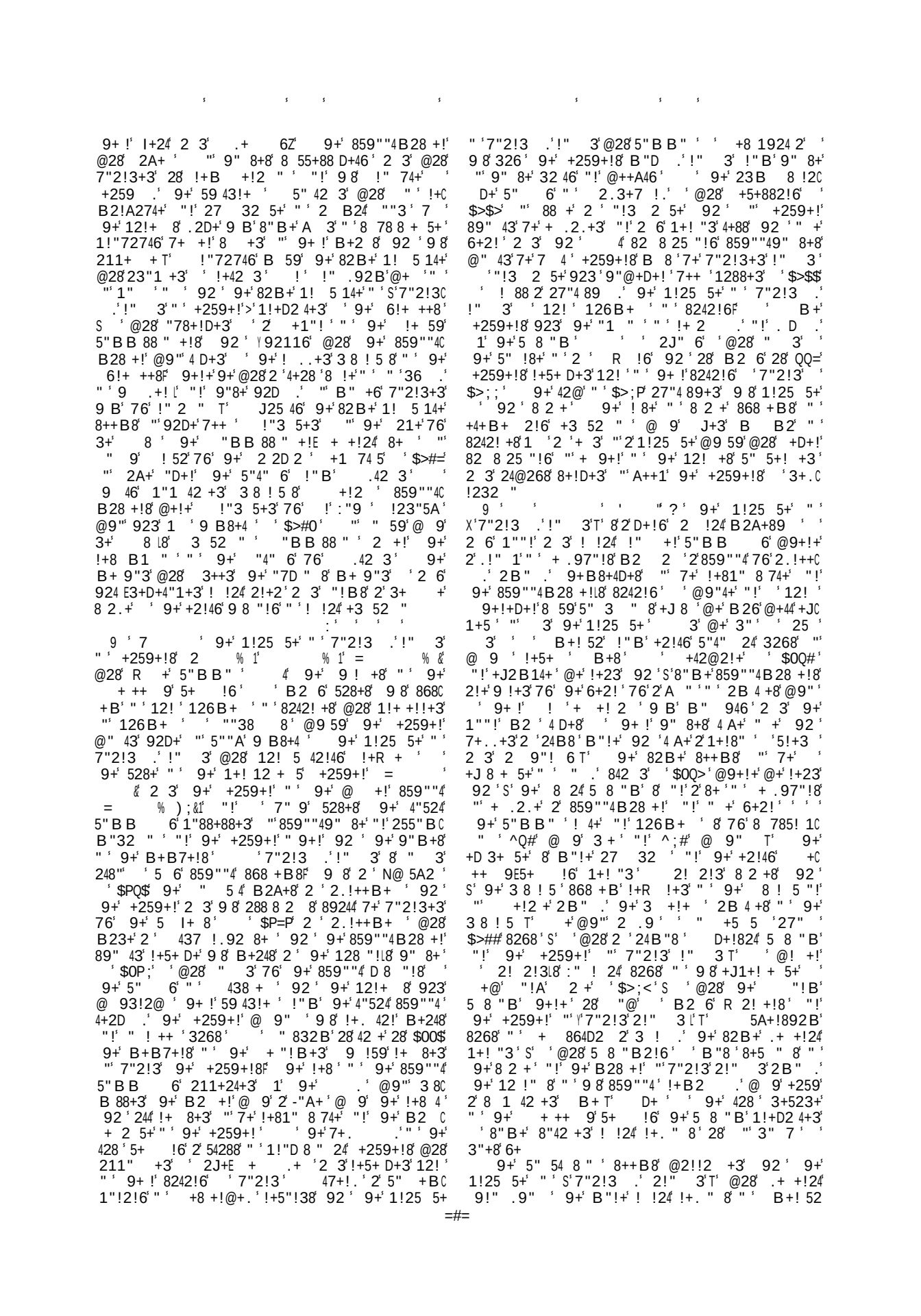

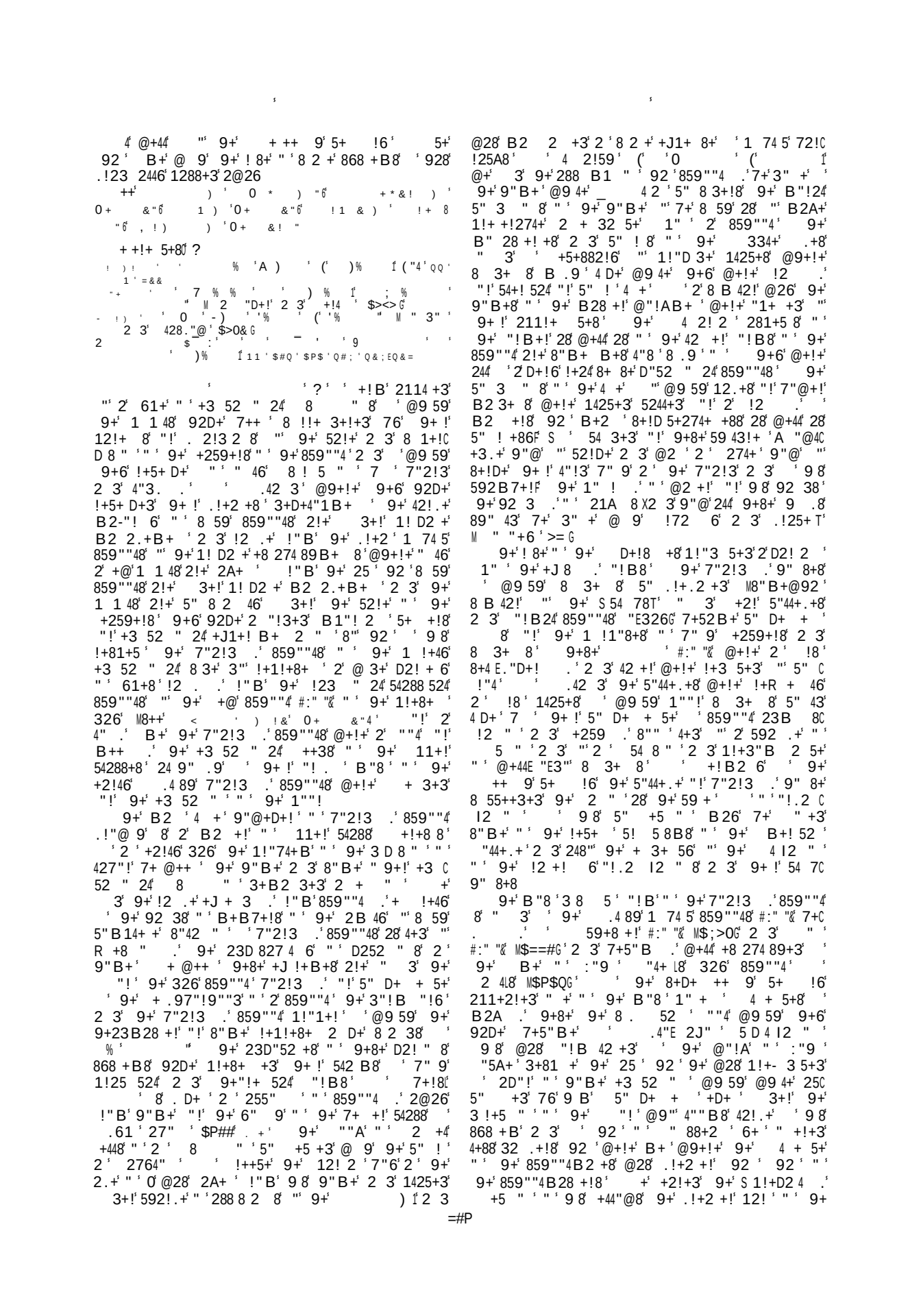

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9+' B"8 ' 3+ +' " 5"B+' " ' 9+' +!72! 2 ' B"D+B+ ' ' 9 8' 4 +' 8' 9+' ' % ' 4 ') ' ' :+ 2' M$>=;G ' M ++' 88+44L8' 7 , ' / ' '% f' 59 ' J G

' 9+' +2!4 +!' 3268' " ' 9+' 7"2!3 .' 859""4' @+' 3' 9+B' +!B+3' S' 54"8+3' T' 859""48' ' 3 8 5C " ' !"B' 9"8+' S' "1+ 'T' "' 326' 1 1 48' 9+' 2B+' 9 ' 8' +J + 8 D+46' 8+3' 2 3' " +' 8 44' 38' 3""!8' ' 8+B 2!8' "!' 9+' !2 .' " ' +259+!8' B2!A+3' % '" 9+' D+!7' ' !"B' @9 59' 9+' "!B+!' +!B' @28' 3+! D+3' !+C 2 +3' 9+' 8 . 52 5+' 8 . .+8 +3' ' .4 89' 76 9+' 8+5" 3' +!B ' S' "' 1 ' "' -2 4 T' ' 8' "' !2 5+' 9"@+D+!' ' 92 ' @+' B 8 ' ! ' "' 3' 9+' +J !+B+' "!B8' " ' 8+54 8 " ' 2 3' !+8 !2 ' 9 8' 2 " ' 928' B23+' +J + 8 D+' 8+' " ' 9+' 7"2!3 .' 859""4' ' 9+' "!B' " ' 9+' 653+' " ' 9+' ' 61+' 59' " ' 9+' 8+54 8 " ' 8"' .+ C +!2446' 3+1!+52 +3' 52 B+' !"B' 9+' 3"B 2 5+' " ' 9+' 9 !59 ' 2 3' 9+' "11"! 6' 9 8' . D+ ' "' 5" !"4' 9+' 8 2 " ' 8 5 + 46' "' B2A+' 1"88 74+' @ 93!2@24' !"B' 8 11"8+346' "7-+5C " 274+H' 4 + 5+8' + ' @+' 3' 92 ' 9+' 8"5 + 6' @9 59' 928' 4+ ' 8' B "8 ' 3+ +' B1!+88' 1" ' !+ 59' 859""48 ' 9+' :+8 8' "1+ +3' 7"2!3C .' 5"44+.+8' !+4 5 2 46 ' 9 8 ' 9"@+D+!' 52 B+' 27" ' 8"" +!' 2 3' @ 9' 4+88' 3 5 4 6' ' 9+' 8" 9' 2 3' ' !2 5+' 92 ' ' +!B2 6

9+' 1!"74+B8' " ' 7"2!3 .' 859""48' "!' . !48' 92D+' " ' 3 +!+3' +88+ 2446' !"B' 9"8+' "!' 7"68 ' ' 9+' " +' 92 3 ' 9+!+' 928' 7++ ' 2' + 3+ 56' "@2!3' 9+' 4 +' " ' 8+54 8 " ' "!' 2' 6" .' @"B2 ' 12! 5 42!46' ' !" 74+3' B+8' @9+ ' 9"B+8' @+!+' 8+ 4+3' 2 3' 2 9+!8' 2@26' " ' 1 74 5' 7 8 +88' 9+' 5" ! ' .2 9+!+3' ' 8' 7"@+!' B2 3+ 8' "' 7+' !2 +3' "!' 5" ! ' 9 +' 7 ' 9+' 9 !59' 928' 3" +' 9+' 42!.+!' @"!A' ' 9+' " 9+!' 92 3 ' 9+!+' 928' 24@268' 7++ ' 2' 8 !" .+!' + 3+ 56' "' A++1' 9+' . !48' @ 9 ' 9+' 9"B+' 5 !54+') +4" ' 2 3' B2 6' " 9+!8' ' D2! " 8' 5" ! +8' 92D+' !.+3' +3 52 " ' "!' 9+B' 2 ' 9"B+

+' 3' 9+' 2!"@' +!6' +2!' "!@)9' .42 3 ' @ 9' 7"2!3+!8' !"B' 8' " 32 " ' ' $$=&' 2! "!3' +!6' 32 +8' !"B' $;PP' M8++' - &" ' * + !)' 34 ' 9+' + "!B2 " '54"8+3' B2 6' +! +8 ' 7 ' @28' 84"@' "' " +!' 2' 8 78 C +' J5+1 .' 9+' 5" D+ 8' @+' 92D+' 4 4+' !+5"!3' " ' 859""48' "!' . !48' 7+ "!+' 9+' 8+D+ ++ 9' 5+ !6' +' 3' !8' 2 98 2' 2A6 8' ' 592!.+' " ' 2' 859""4' 2 ' +6 ' 2 3' " 9+!8' 52 ' 7+' !25+3' 76' B+2 8' " ' +168!' 2!6' 2 3' 8 B 42!' @! .8' " ' 5 3+ 24' !+ +!+ 5+' 5528 " 2446' 2' B "3+! ' . !48!' 859""4' 4268' +B1928 8' 1" ' !2 C .' "!' 9"B+' 3 +8 ' 7 ' 9+8+' 2!+' 21 ' "' 7+' !+3 5+3' 28' 8"5 24' 23D2 5+B+ ' 2 3' !+5". " ' 8' 8+5 !+3 ' 9+' "43' 61+' " ' S' 89 .' T' 859""4' 8' +88+ 2446' D"52 " 24' ' 9+' 8+ 8+' " 1!+12! .' "!' 9+' 5" D+ " 8' " '8"5 + 6 ' 2 3' 9 8' 1928+' 8' 8 44' +D 3+ ' +D+ ' 9" .9' 9+' 1!+12!2 "!6' 5C " ' 8' 2A .' 2' 4+23 .' 1425+' 9 8' 592 .+' B2!A8' 2 ' 23D2 5+' 7 ' 9+!+' 8' !"" B' "!' B"!+' 3+ +' +J1+!' B+ 2 " ' ' 9+' @"!A .' " ' " ' 859""48' "!' . !48' @9 59' @ 44' !2 A46' !+5". I+' 9+' 9"B+' 2 3' 7 8 +88' 25 D +8' " '@"B+ ' 28' @"! 96' " '8 36' 1" ' 2' 85 + 5' 728 8' M ++' !& " 4' ' :212 ' 1!25 524' .2!3+ .' 2 3' -1 59+ ' 54288+8' 2!+' 54 3+3' ' 9+' 5" !8+8

' B+! 52' 5" 3 " 8' 923' 1!+D+ +3' 5!68C 244 I2 " ' 24" .' "43+!' 4 +8' 2 3' 9+' B2 ' 5 !!+ ' 3 ! .' 9+' 5+ !6' @28' 1 74 5' +3 52C " ' 2 3' 92 ' " ' 9+' 6 ' !2 9+!' 92 ' 9+' ' 61+' 9+' 42 +!' 9"@+D+!' "!' !+28" 8' " ' 5" D+ + 5+' 928' 2 ' 244' B+8' 9+43' 2 ' B1"!C 2 ' 1425+' !"B' 9+' .!" 1' " ' 7"68' 5"44+5 +3' ' 9+' 9"B+' " ' 2' +@' .42 3' 54+!.6B2 ' 928' 5"B+' ' B+' 2' 7"2!3 .' 859""4' +' 61+' 928' "44"@+3' " + ' 2 ' 2' 5" 8 3+!274+' 3 8 2 5+' 9+

.4 89ʻ 1 74 5ʻ 859""4ʻ " 9+!ʻ 928ʻ 3+D+4"1+3ʻ @ 9ʻ B2 6ʻ B1"! 2 ʻ 592 .+8ʻ !"Bʻ 9+ʻ 2523C +B6ʻ "ʻ 9+ʻ ! 2 8ʻ 9 8ʻ 8ʻ 7+8ʻ 8++ ʻ ʻ8"B+ʻ "ʻ 9+ʻ "@ ʻ 2523+B +8ʻ #:" "&" ʻ +@ʻ .42 3ʻ ʻ 9 !3ʻ 61+ʻ @28ʻ 8++ ʻ ʻ 9+ʻ B2 24 427"!ʻ 8 " 8ʻ #:" "&" "44"@ .ʻ 9+ʻ 4+23ʻ "ʻ +44+ E 7+!.ʻ 9+8+ʻ 8 2446ʻ ""Aʻ +81+5 24 255" ʻ "ʻ 9+ʻ 12! 24 "!ʻ+ !+ʻ8+4 E8 11"!ʻ 76ʻ 9+ʻ8 3+ 8ʻ " 3ʻ "ʻ8"B+ʻ+J + ʻ+D+ ʻ "E326ʻ ʻ8"B+ʻ "ʻ 9+ʻ " 9+!ʻ 61+8ʻ 2 3ʻ +J1+5 +3ʻ "ʻ 7! .ʻ 27" ʻ 2ʻ 9"!" .9ʻ 1968 524 3+D+4"1B+ ʻ ʻ 5" +5 " ʻ @ 9ʻ ʻ@ 9" ʻ 9+ʻ825! 5+ʻ" ʻ859"428 5 2 2 C B+ 8ʻ 9+ʻ 42 5ʻ5"28ʻ 82@ʻ B2 6ʻ "ʻ 9+8+ʻ 8 " 8ʻ ! 8+ʻ 2 3ʻ 244ʻ 9+ !ʻ 2 4 !+ʻ @28ʻ 3 +ʻ ʻ 12! ʻ "ʻ 27 9 6ʻ "ʻ !+5". I+ʻ 9+ʻ 2!E !+259 .ʻ5" 8+R + 5+8ʻ "ʻ 9+ !ʻ859+B+8ʻ ʻ8 5C 5+88 4ʻ2 3ʻ 9+ʻ.!+2ʻ2B" ʻ"ʻ B+ʻ ++3+3ʻ "ʻ B2A+ʻ + 5 + ʻ B259 +!6ʻ +R 24 "ʻ "!@2!3 .ʻ 9+ʻ 28Aʻ ʻ 8ʻ +!+8 .ʻ "ʻ " +ʻ ʻ8 59ʻ 2ʻ 859""4ʻ 28ʻ 2B1 " ʻ 9"@ʻ 9+ʻ 8+4 E8 11"!ʻ 3+2ʻ + 38ʻ "ʻ B"D+ʻ "ʻ 9+ʻ725A.!" 3ʻ 28ʻ 2523+B 5ʻ 8 2 32!38ʻ 2!+ʻ !2 8+3

9+ ʻ 9+ʻ 3 8 ! 24 281+5ʻ @28ʻ 9 8ʻ "!ʻ 9+ʻ B+ʻ 272 3" +3ʻ 9+ʻ Sʻ!+ ! ʻ "ʻ 2 !+ʻTʻ + 3C + 56ʻ @ 9ʻ 8ʻ 211!+5 2 " ʻ " ʻ 9+ʻ B1"! 2 5+ʻ L" ʻ!+5". " ʻ" ʻ 9+ʻ 1968 524 2 !+ʻ4+3ʻ "ʻ 9+ʻ +8 274 89B+ ʻ " ʻ 859""48ʻ ʻ@9 59ʻ 8+4 E8 11"!ʻ 2 3ʻ 1!"3 5 D+ʻ 3 8 !6ʻ@+!+ʻ !2 A46ʻ. D+ ʻ 1ʻ 81+5 24 + "!ʻ @28ʻ B23+ʻ "ʻ 1!"D 3+ʻ B"!+ʻ 23+C R 2 +ʻ 1968 524 !2 .

9+ʻ@"!Aʻ" ʻ :29 ʻ#:" "&2 3ʻ " 9+!8ʻ ʻ !"1+ʻ 923ʻ B23+ʻ 1!".!+88ʻ ʻ 9 8ʻ 3 !+5 " ʻ B 59ʻ 4+88ʻ 3 5 4 ʻ ʻ 8ʻ " ʻ 8 !2 .+ʻ 92ʻ 9+ʻ B 4 2!6ʻ !2 .ʻ. D+ ʻ "ʻ6" 9ʻ ʻB2 6ʻ5" ! +8ʻ89" 43ʻ 92D+ʻ 4+3ʻ "ʻ 9+ʻ 23"1 " ʻ " ʻ 9+ʻ "!Bʻ " ʻ 9+ʻ B 4 2!6ʻ 859""4 #:" "&"

ʻ 32B8ʻ ' ʻ 2) ʻ % ʻ '% 1ʻ @ 44 7+ʻ " 3ʻ 2ʻ 8"B+@92ʻ 1"1 42!ʻ 255" ʻ " ʻ +ʻ !+1!+8+ 2 D+ʻ 7"2!3 .ʻ 859""48ʻ+J + 3 .ʻ !"Bʻ +@ʻ .42 3ʻ "ʻ 9+ʻ 25 5ʻ "28ʻ 9+ʻ + 3+ 56ʻ "@2!3ʻ 859""48ʻ " ʻ 9 8ʻ ;!1+ʻ 928ʻ C 5!+28+3ʻ @ 9ʻ 9+ʻ .!"@ 9ʻ " ʻ @+24 9ʻ 32B8ʻ 8 2 +8ʻ 92ʻ Cʻ@9+!+ʻ" +ʻ8 59ʻ 8 " ʻ+J 8 +3ʻ 1! "!ʻ "ʻ $>&Pʻ @+ 6ʻ B26ʻ 7+ʻ 5" +3ʻ "@ Tʻ B" .ʻ 9+ʻ +2!4 +!ʻ @+!+ʻ 2I2!+ 9ʻ 523+B6ʻ M$0P<Gʻ 9 44 18ʻ 3"D+!ʻ M$00>Gʻ 9 44 18ʻ J+ +!ʻ M$0>$G

ʻ 8ʻ " ʻ 8 !2 .+ʻ 92ʻ 8"5 24 !+ "!B+!8ʻ 92D+ʻ ʻ244 1+! "38ʻ 142 +3ʻ "ʻ 8+ʻ 9+ʻ7"2!3 .ʻ859""4ʻ "ʻ 255"B14 89ʻ 9+ !ʻ 1 !1"8+8ʻ 2I2!+ 9ʻ 244 ʻ + 864D2 2ʻ @28ʻ " 3+3ʻ ʻ $0P<ʻ 2 3ʻ "!ʻ 2ʻ +@ʻ 6+2!8ʻ +J+B14 +3ʻ 8"B+ʻ "!B8ʻ " ʻ "!2C D 2 ʻ "B B 8Bʻ +ʻ " ʻ 9+ʻ B"8ʻ +!+8 C .ʻ 142 8ʻ " ʻ 9 8ʻ A 3ʻ 8ʻ 92ʻ 23D"52 +3ʻ 76ʻ +1+44+ +!ʻ 2ʻ :25"7 ʻ 2 3ʻ 1 ʻ "!@2!3ʻ 2 +!ʻ 9 8ʻ 3+2 9ʻ ʻ$0<;ʻ 76ʻ "7+81 +!!+ʻ ʻ 9+ʻ 88+BC 746ʻ B" .ʻ" 9+!ʻ1!"D 8 " 8ʻ@28ʻ 9+ʻ "44"@ .0 Sʻ +ʻ 8ʻ "!32 ʻ 92ʻ 244 59 43!+ ʻ. !48ʻ 28ʻ @+44 28ʻ 7"68ʻ. !48ʻ !"Bʻ D+ʻ "ʻ +4+D+ ʻ 2 3ʻ 7"68ʻ !"Bʻ D+ʻ "ʻ @+4D+ʻ 8924 7+ʻ +3 52 +3ʻ ʻ 5"BC B" ʻ 2ʻ 9+ʻ +J1+ 8+ʻ " ʻ 9+ʻ 8 2 +ʻ 2 3ʻ 8924 !+5+ D+ʻ "!ʻ 8 Jʻ "!ʻ 8+D+ ʻ 6+2!8ʻ 9+ʻ 82B+ʻ +3 52C " Tʻ B 42!ʻ 859+B+8ʻ @+!+ʻ 23D"52 +3ʻ 76ʻ " ! +!ʻ 2 3ʻ" 9+!8ʻ "+ 9+L8ʻ $ %ʻ$ %ʻ 8ʻ B 59ʻ 4+88ʻ A "@ ʻ 92 ʻ ʻ 3+8+!D+8ʻ "!ʻ 8ʻ 8 .C .+8 D+ +88ʻ ʻ" 9+!ʻ859""4ʻ +438ʻ 28ʻ @+44 28ʻ 92ʻ " ʻ 9+ʻ 7"2!3 .ʻ 859""4

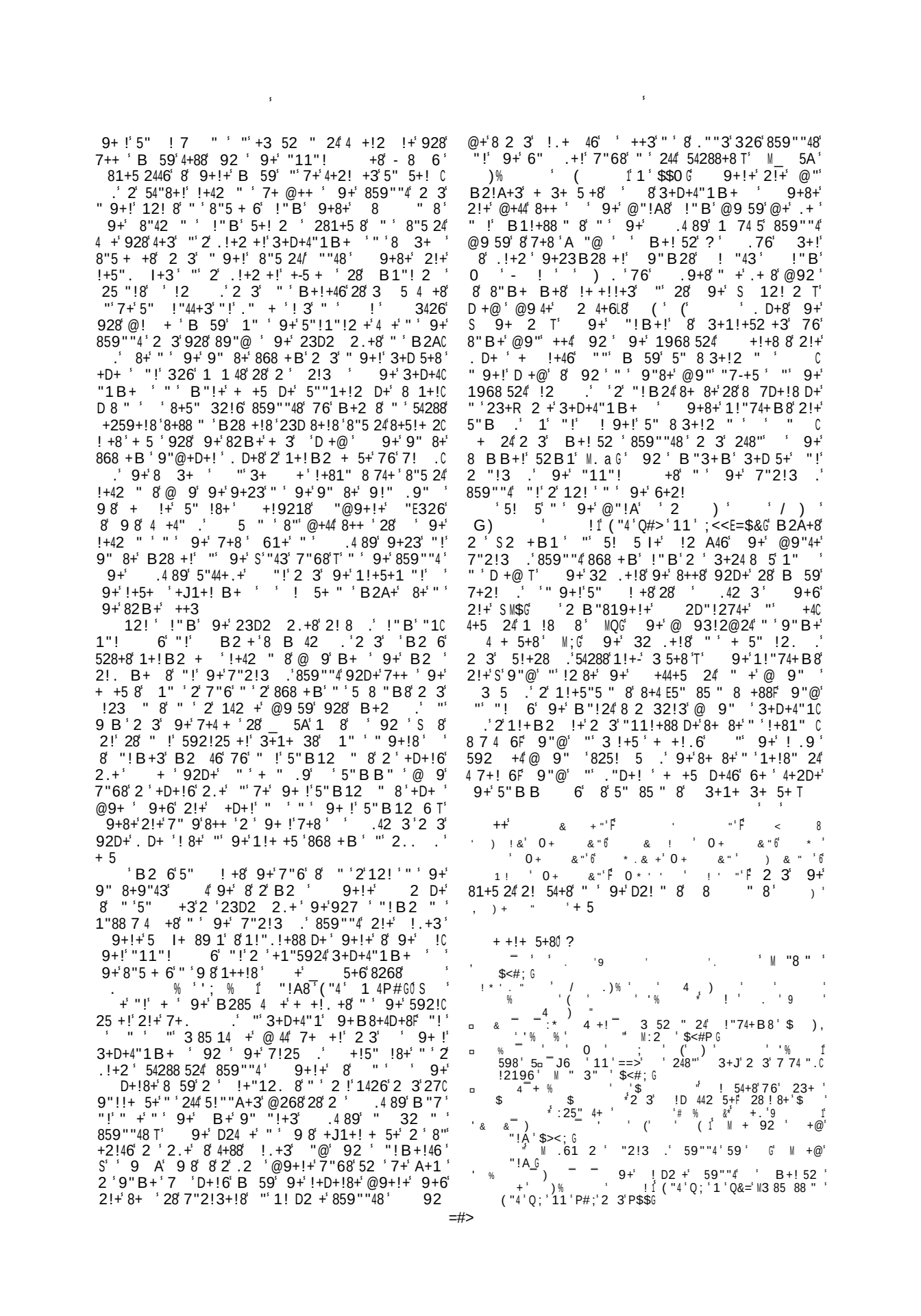
9+ʻ B"!+ʻ !+5+ ʻ 3 85 88 " 8ʻ 5" 5+! .ʻ 9+ʻ 5"B B 6ʻ 52!+ʻ " ʻ 4 4+ʻ 59 43!+ ʻ 76ʻ !8ʻ 92!4" +ʻ +!A 8ʻ 4B2 ʻ 2 3ʻ " 9+!8ʻ 248"ʻ 9+ʻ 5!+28 .ʻ + 3+ 56ʻ "!ʻ 9+ʻ 5"B B 6ʻ "ʻ 2A+ʻ 255" ʻ " ʻ 9+ʻ ++3ʻ " ʻ B"!+ʻ 23+R 2 +ʻ ++3 .ʻ " ʻ 859""4 59 43!+ ʻ "1+ ʻ 1ʻ 1928+8ʻ " ʻ 9+ʻ 8 7-+5 ʻ @9 59ʻ B26ʻ @+44 !+R !+ʻ B"!+ʻ 23+C R 2 +ʻ5" 8 3+!2 " ʻ 7+ "!+ʻ4" .

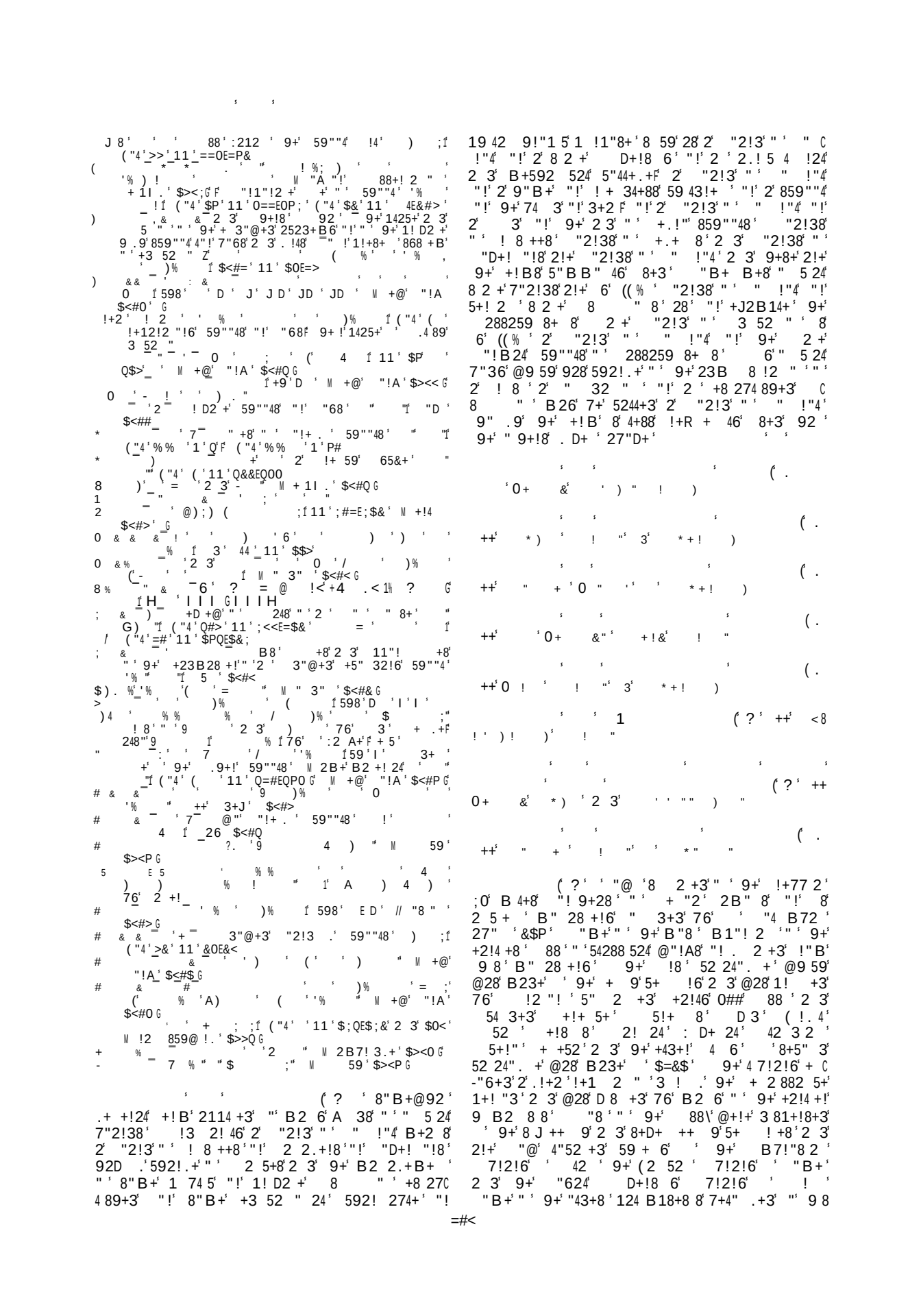
59 +ʻ923ʻ 5244+3ʻ "!ʻ2ʻ5"B14+ +ʻ8+12!2 " ʻ" ʻ 59 43!+ ʻ !"Bʻ 9+ !ʻ9"B+ʻM "!A8ʻ("4ʻ;ʻ11ʻ=#&E =#0Gʻ ʻ 25 ʻ 9+ʻ 8++B+3ʻ "ʻ 9 Aʻ 92ʻ 76ʻ 9+ʻ 8"42 " ʻ" ʻ 59 43!+ ʻ !"Bʻ 9+ʻ 8"5 + 6ʻ " ʻ 9+ !ʻ 326ʻ 2ʻ +@ʻ 8 2! ʻ 5" 43ʻ 7+ʻ B23+ʻ 76ʻ @9 59ʻ @+ʻ 89" 43ʻ 7+ʻ !++3ʻ !"Bʻ B2 6ʻ "ʻ 9+ʻ 3+ +5 8ʻ 92ʻ "@ʻ !" 74+ʻ 8ʻ 9 8ʻ @ 9ʻ 9 8ʻ +!+8ʻ ʻ 1968 524@+4 2!+ʻ2 3ʻD"52 " ʻ928ʻ7++ ʻ2ʻ 25 "!ʻ ʻ 9+ʻ 3+D+4"1B+ ʻ " ʻ 9+ʻ + 859+ʻ 2 3+!E I +9 .89+ B+ʻ #:" "&" ʻ ! 9+!ʻ 2114 52 " ʻ" ʻ 9+8+ʻ 3+28ʻ "ʻ 9+ʻ !2 .ʻ" ʻ 211!+ 5+8ʻ 8 8 . .+8 +3ʻ ʻ 7) (ʻ ʻ %) ʻ " ʻ ! ʻ +"!.ʻ +!859+ 8 + +!ʻ M1ʻ $=G

+ʻ " ʻ 9+ʻ B"8ʻ 8 . 52 ʻ 3+D+4"1B+ 8ʻ 3 ! .ʻ 9+ʻ 428ʻ R 2! +!ʻ " ʻ 2ʻ 5+ !6ʻ ʻ 9 8ʻ 3+12! B+ ʻ " ʻ 9+ʻ 859""4ʻ 928ʻ 7++ ʻ 92ʻ 592 ʻ " ʻ 859""48ʻ 7+. .ʻ ʻ 77" 89"4B+ʻ #:" "&" ʻ $>>>ʻ 3+!ʻ ! ʻ +5 4 +33 +ʻ 2 3ʻ 52!! +3ʻ "ʻ +!B2 6ʻ76ʻ !ʻ +!B2 ʻ + Iʻ ʻ 9+ʻ + 859+ʻ 2 3+!I +9 .89+ B+ʻ #:" "&" 2)3 "ʻ !2 5+ʻ 76ʻ ʻ 3B 3ʻ +B"4 8ʻ ʻ l 5"4+ʻ3+8ʻ "59+8ʻ #:" "&" +ʻ " ʻ 9+ʻ B"8ʻ B1"! 2 ʻ " ʻ 9+8+ʻ 859""48ʻ 8ʻ 9+ʻ 5"+3 52 " 24 8 " ʻ +8 27C 4 89+3ʻ 76ʻ: ʻ ʻ 234+6ʻ2 ʻ +324+8ʻ #:" "&" 9+!8ʻ 92D+ʻ 7++ ʻ +8 274 89+3ʻ ʻ !2 5+ʻ +!B2 6ʻ @ I+!42 3ʻ 2 3ʻ "42 3ʻ +!42A+ ʻ 2ʻ 2ʻ "! +ʻ 3ʻ 8ʻ 9+ʻ B+! 52ʻ !+1!+8+ 2 D+ʻ 9+!+ʻ2!+ʻ ʻ244 "D+!ʻQ#ʻ "!ʻ 9+ʻB"8ʻ12!ʻ 3+C 1+ 3+ ʻ " ʻ+259ʻ " 9+!ʻ2 3ʻ89"@ .ʻ!+B2!A274+ 2321 2 " ʻ "ʻ 2 " 24 5" 3 " 8ʻ 6+ʻ +3ʻ 76ʻ 9+ʻ5"B B" ʻ2 +B1ʻ "ʻ 2 "!3ʻ "ʻ 9+ʻ8 C 3+ 8ʻ"11"! +8ʻ "ʻ B++ʻ!+24 1!"74+B8ʻ@ 9C ʻ 9+ !ʻ !2 .+ʻ ʻ859""4 "!.2 I2 " ʻ2 3ʻ4 +ʻ 9+!+ʻ 8ʻ 2ʻ B2!A+3ʻ +B1928 8ʻ 1" ʻ 8 B14 5 6ʻ " ʻ4 +ʻ2 3ʻ ʻ +2!46ʻ 244 528+8ʻ 2ʻ !+24 +!+8ʻ ʻ " 3""!ʻ4 +ʻ 76ʻ B+2 8ʻ " ʻ 81"! 8ʻ 2 3ʻ 12! 5 12C " ʻ ʻ D2! " 8ʻ "!B8ʻ " ʻ 1!"3 5 D+ʻ 427"!

9+ʻ1!"74+B8ʻ " ʻ 9+ʻ7"2!3 .ʻ859""4ʻ2!+ʻ B2 6ʻ 2 3ʻ5"B14+Jʻ 6ʻ "ʻ B+2 8ʻ4+28ʻ 8ʻ 92ʻ " ʻ 9+ʻ B B"!24ʻ 5 8 "B8ʻ 211+2! .ʻ" + B+8ʻ ʻ2ʻ8"C 5 + 6ʻ " ʻ7"68ʻ " ʻD2! " 8ʻ2.+8ʻ 9+ʻ 2.. .ʻ868C +Bʻ 928ʻ7++ ʻ2ʻ B+8ʻ D"4D+3ʻ ʻ 9 8ʻ "B+ʻ 9+23B28 +!8ʻ 92D+ʻ 8+12!2 +3ʻ 9+ʻ 859""4ʻ "ʻ 8+5 " 8ʻ255"!3 .ʻ "ʻ2.+8ʻ 85 88 " ʻ" ʻ8"B+ʻ " ʻ 9+ʻ B"!24 1!"74+B8ʻ @ 44 7+ʻ " 3ʻ ʻ 59!8 1ʻ 1ʻ 00F +). ʻ !ʻ 5 "7+!ʻ $>0>ʻ 1ʻ Q<=F 2 3ʻ 9+ʻ 1!+ 25+ʻ "ʻ 9+ʻ 8 J 9ʻ +3 " ʻ" ʻ .9+8ʻ 0 ʻ - ! ʻ ʻ) . "

9+!+ʻ 8ʻ ʻ 9+ʻ 7"2!3 .ʻ859""4ʻ 2 ʻ "11"!C 6ʻ "ʻ"ʻ4 4+ʻ !+5". I+3ʻ "ʻ 255"B14 89ʻ+JC 1+! B+ 24 @"!Aʻ M8++ʻ < ʻ) !&ʻ0+ &"4ʻ ʻ 9+ʻ @9"4+ʻ 9"@+D+!ʻ 9+ʻ B+ ʻ + .2.+3ʻ ʻ 9 8ʻ @"!Aʻ 126ʻ "ʻ"ʻ4 4+ʻ2 + " ʻ "ʻ +3 52 " ʻ " 8 3+ʻ 9+ !ʻ +438ʻ 2 3ʻ @ 9ʻ 2ʻ +@ʻ " 274+ʻ +J5+1 " 8ʻ 28ʻ 9+ʻ @"!Aʻ " ʻ ! "43ʻ 2 3ʻ 9! .





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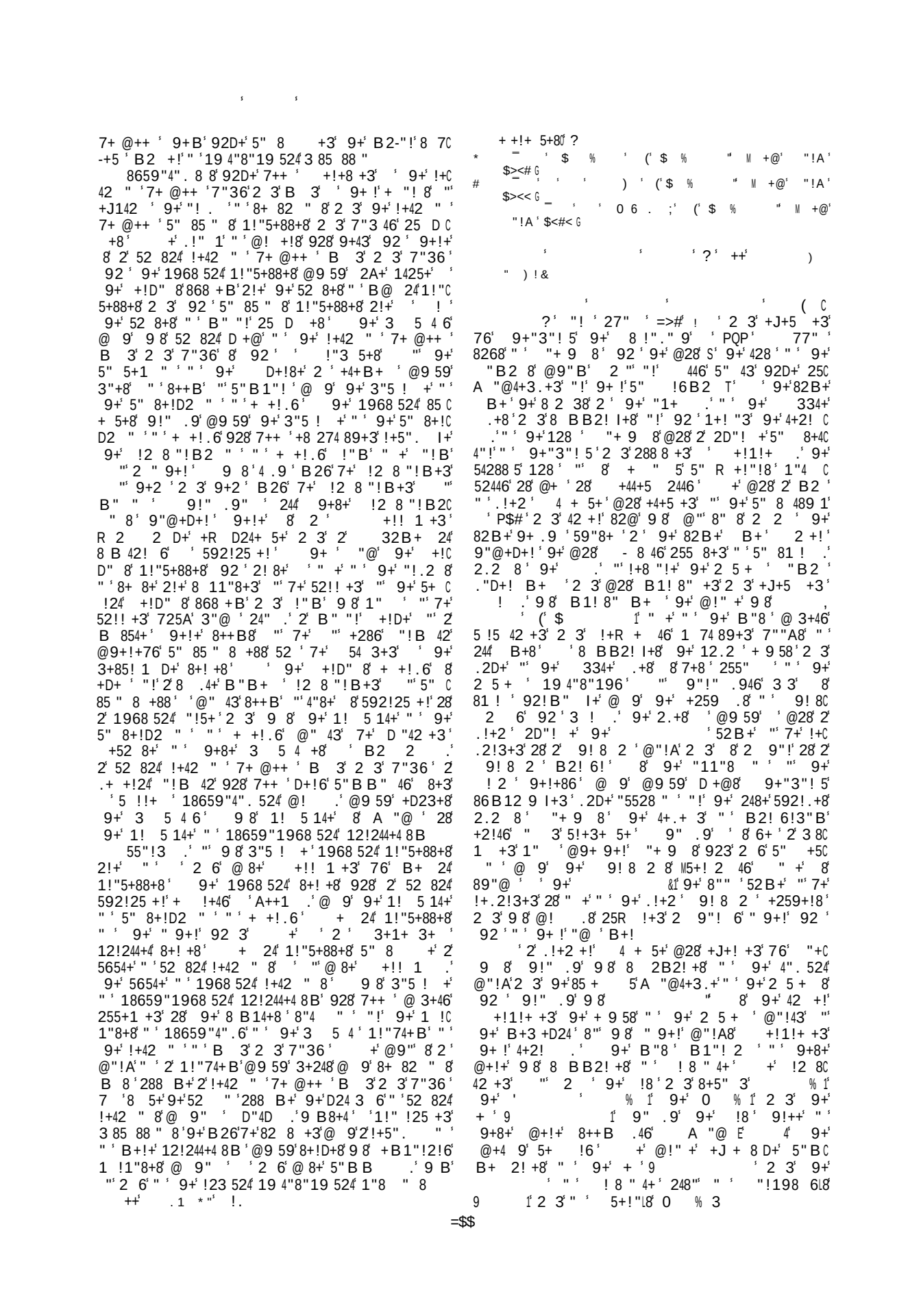

=> P&#1 1 48 8 3+ " 9+5 +8 9+ 8 ! 5C " 8 " 9+ B"8 +4+B+ 2!6 592!25 +! 2 3 +D+ 9+5 +8 9+ 1! B2!6 859""48 92D+ 2 D+!6 4 B +3 !2 .+ 28 59 43!+ " 9+ 7+ +! 54288+8 + +! 9+ 8+5" 32!6 859""48 2 2 +2!46 2.+ 9+ 1 74 5 +J1+ 3 !+ ."D+! B+ 2 3 B 5 124 "! 1! B2!6 +3 52 " 2B" 8 " 27" PP# ### 7"4 D 2 "8 2 2446 +R D24+ "dQ$= ###' +3 2 +8 5 !!+ 56 9+ " 5 24 !+. 42 " 8 ."D+! .23B 88 " " 9+ 9 .9+! 8 " 8 2 3 9+ !+R !+B+ 8 "! 1!" +88 " 24 3 14"B28 3+ +!B + 9+ 85"1+ " 8+5" 32!6 +3 52 " @9 59 8 81+5 2446 +JC + 3+3 " 9+ 4 +!2!6 8 3+ $<#& 9+!+ @+!+ !+1"! +3 > 1 74 5 5"44+.+8 P 54+! 524 +8 274 89B+ 8 2 3 P 1! D2 + % 1 @ 9 $Q& +259+!8 2 3 QP;# 8 3+ 8 233 " "9+8+5" 32!6 859""48 "!4 7+!24 5 4 !+ 9+!+ 2!+ 859""48 " 2! 8 2 3 !23+ 2 3 859""48 " 5"B B+!5+ B2 2 +3 2 2 2I 5!+ 2 3 2 9+ 3+12! B+ 24 521 248 9+ !2 ." " +259+!8 8 2 8 7-+5 92 !+5+ D+8 B 59 2 + " "4 D 2 2 3 9+5 6 " 5!+ 52 7"28 2 @+44E"!.2 I+3 "!B24 859""4 @9"8+ 3 !+5 "! ! " B2 8!+5". I+3 28 2 4+23+! 9"8+ !+8+2!59+8 @9 59 2!+ . D .85 + 5 1!+5 8 " "9+ B+ 9"38 " B"3+! +3 52 " 9+!+ 8 "! "!.2 I+3 D+!8 6 "4 D 2 7 +2!46 +D+!6 5 D 4 3+12! B+ /8 1!"D 3+3 @ 9 859""48 " 42@ B+3 5 +2 3 9+"4".6 9+ 8 2 32!38 " 1!" +88 " 24 !2 .2 3 " 9+ 3 14"B28 92 + 4+ 9+ 9"43+!8 "1!25 5+ 9+ 4 7+!24 2 3 +59 524 1!" +88 " 8 2!+ 9 .9 E

(? +" 9+ +2!4 +8 8 " 8 " 9 .9+! 4+2! ." !"1+ @9"8+ 9 8 "!6 52 7+ 3+ +46 !25+3 725A "2 1+! "3 7+ "!+ 92 " ! +! 8 M. D G 3+! @9"8+ 4 + 5+ .2 +3 2 !"1+2 !+1 2 " 9+ +2!4 +8 4+.24 592! +! @28 . D+ "9+ D+!8 6 $$P> 76 B1+!"! !+3+! 5A 2!72!"882 @9 59 9"@+D+! 5" C 2 8 " 9 .B"!+ 92 2 " 5 24 !+5". " 9+859"42!8 2 3 .!2 8 9+B 8"B+ 1!)+.+8 9+ +2!46 9 8 "!6" 9+ D+!8 6" "4". 2 8 9+ +2!46 9 8 "!6" 9+ D+!8 +8 M. a G @28 9+!+ D+!6 42!.+46 92 2 "!.2 I2 " @28 +D"4D+3 @9 59 8+!D+3 28 2 B"3+4 "! B+!" 8 " 9+! 8 " 8 9+ +2!4 +8 8 2 +8 @9 59 2!+ "@ 12! 2D2 4274+ 32 + !"B $;$0 9+ 25 4 6 " 42@ @28 9+ +2!4 +8 2 3 B"8 2B" 8 25 4 +8 " B+3 5 + 2 3 2! 8 @+!+)33+3 25 4 6 " 9+"4".6 +J 8 +3 7 +D+! 2 2 +3 B 59 1"1 42! 6 "B+ @+!+ 23B +3 " " 46 28 8 3+ 8 7 28 C 8 ! 5 "!8 2 3 1!" +88"!8 28 +2!46 28 9+ 7+C . " 9+ + .9 ++ 9 5+ !6 9+ C D+!8 6 928 7++ !+"!.2 I+3 9+ 428 5+ !6 25 4 +8 " 2! 8 85 + 5+8 42@ 2 3 B+3 5 + 2!+ B2 2 +3 28 @+44 28 859""48 " 2.! 5 4 !+ 192!B256 2 3 D+ +! 2!6 B+3 5 + $<#< 9+!+ @28 2 + !"44B+ "+ "27" Q### 8 3+ 8 ++ !) (6 !& * +)) 6 #) 8 1 " "

) 3&. + -) $=## M +!4 $>>P G " − ( ) " M J "!3 $><P G

"! ? . 89 1"+ 2 3 9 8 "! 2 @9" :2B+8 L8 !+ . 1!"1"8+3 2 859+B+ "!" 2 2523+B6 " 4+ +!8 2 3 85 + 5+ @9 59 $&Q# @28 !+ +!!+3 " 2 "B B ++ " 9+ " 8+ " "!38 " 9+ B" " " " "!3 3B !24 5A .92B 9+ 3+2" 2 2523+B6 M. a G @28 9+ 2 ! ! 5+ + !6 M8" " :2B+8 G 923 8 11"! +3 8 59 2 8 " @9 59 244 9+ .L8 2!38 2 3 " 9+!8 89" 43 7+ +3 52 +3 .42 3 @ 9C " 9+ +5+88 6 " ." .27!"23 " 5"B 14+ + 9+ ! !2 . M ! B19!+6 47+! L8 G) 4 . % "& ! 5+ + !6 3 +3 $&$> 9+ 1!"-+5 @28 248" " "!3 25" L8 B 3 :2B+8 8++B8 " 92D+ 1!"C 5++3+3 8" 2! 28 " .!2 2 8+24 723.+ 2 3 +8C 5 59+" 8 "! 9+ B+B7+!8 " 9+ 2523+B6 9+ "44+.+ @28 " 7+ " !" +2!" 3" S 2446 8 2-+8 6 " .!25 " 846 233+3 92 9+ 5+ 8 !+ " 244 7""A8 @9 59 92 34+3 " 9 .8 3 D + 89" 43 7+4" . " 9+ " 5+!8 T M ++ " 9 8 2 3 " 9+!' 1!"-+5 8 "!' 2523+B +8 J "!3 8 "5 + 6 % 1 $8 +! +8 2! (! 244 8L8 + +! 2! 54+ 76 " :25A8" 11 Q&<E;#0 G $&Q< "4 " @!" 9+ % 1 - 8 6 . 9+ B1"! 2 5+ " 211!+ 5+89 1 2 3 89"@ . 92 9+ 128 6" 98 " . ""3 2B 46 923 7++ S 211!+ 5+8 T 2 3 2!. . 92 211!+ 5+89 1/ 3 3 " +JC . 89 9+ S 542 B8 " .+ !6 T 9 8 8 8 . 52 28 89"@ . 9+ 3+523+ 5+ " 9+ "43 3+2" 211!+ 5+89 1 76 92!4+8 L8 !+ .

(? !.2 I+3 $>P0 2 3 !+5" 8 +3 $<#= 3+! 9+ 3 2 / D+!8 +8 5 8 2 +J2B . 7"36 5" 8 8 . " 2 6 3 52 + 9+ 25 4 +8 " 2! 8 42@ B+3 5 + 2 3 + . ++! . 9+ +259 . 5"44+.+8 "!.2 I+3 3+! 9 8 D+!8 6 2!+ 419 8 " + 48" % 2D +!L8 !2 3 +3 524 2 3 !:2B8+ - : - 79" 6 N2! 9"89 23!2882 9+ 428 "! 2!8++ 8 3+ 8 ++ ") ! * +))

("!: N ? "! 2 2. 2!+2 246 QQ 2 3 3 +3 @9 4+ 2 + 32 5+ 2 9+ " 5 4 " 6" 8 $QO= $Q=Q 9+ + +!+3 9+ "!3+! " 9+ !2 5 852 ! 2!8 2 3 2 +!@2!38 8 3 +3 2 9+ D+!8 6 " 2! 8 @9+!+ $QP;9+ 7+52B+ 2 +259+!2 3 $QPP 3"5 "! 8 8"7! C R + S 8+!219 524T 8 "7+ +! @ +88 " 9 8 2B+ 92 9+ 25 92 $QP& 9+ 7+52B+ 1! C 5 124 " 9+ !3+!" !2 5 8 2 3 B .9 92D+ 7++ 923 9+ @ 89+3 !597 89"1 " "!A + 38 9 B 1+!8+5 .9+ +B + 2 3 4 7+!24 B 3+3 ".+! 25" 9+41 ." "+4+5 "1+ !+."!6 % 2 3 7+ .211" +3 2 52!3 24 2 3 89"1 " 472 " 8 @"!A8 54 3+ =$;

=$=

N M$>$=E$>>>G ? 1!"B + +!B2 859""4B2 2 3 54288 524 19 4"4". 8 +@28 7"! 2 .+ 8241 2 2 3 !+5+ D+3 9 8 8+5" 32!6 +3 52 " 2 9+ 2B" 8 859""4 "! 2 9+ 8 3 +3 19 4"4".6 2 9+ D+!8 6" + 1I . 3+! " ! +3 +!B2 2 3 +!4 3+! "5A9 2 3 259B2 $>;& 9+ 7+52B+ 2 +259+! 2 9+ 4"59B2 8 +! !+83+ 2 3 $>;>9+ !+5+ D+3 2 1"8 " 2 9+ ! +3! 59E +!3+! 6B 28 B +!4 $>=>9+ @28 5244+3 28 1!" +88"! " 54288 524 19 4"4".6 "9+ D+!8 6 " (+ 2 @ 9 9+ 81+5 24 D +@ " 288 8 . J +! 9+ !+"!.2 I2 " " 9+ 8 ! 2 8+5" 32!6 859""4 868 +B 9+ @"B+ @"!A+3 " 9+ 2B" 8 !) ($ (4 &1 S 9+ 2. 2 92! 2 " 8 ! 2 8+5" 32!6 859""48 T @9 59 2 . C !2 +3 2 +@ +!2 9+ 9 8 "!6 " 9 .9+! +3 C 52 " 8 ! 2 9+ !) (@28 1!"B 4.2 +3 76 9+ 8 +! " 3 52C " " +"9 $>=<2 3 8 B2 " 4 +8 8 8 44 "!5+ 2 9+ 1!+8+ 326 '5" 2 +3 8 ! 5 " 8 "! 9+ +259 . " 9+ D2! " 8 8 7-+5 8 B "8 " @9 59 @+!+ @! + 76 " I 9+8+ 8 ! 5 " 8 2!+ 1+!B+2 +3 76 9+ +!72! 2 81 ! 2 3 2!+ 44 " 9+ +8 1+32.". 524 8.9 9+ 19 4"4". 524 8+B 2!6 @9 59 9+ 5" 3 5 +3 9+ D+!8 6 9+ !2 +3 52127 4+ +259+!8 "! 9+ +@46 !+ "!B+3 9 .9+! 859""48 2 3 9!" .9 9+ @ % (() % % 7 A ( ) 7 ,) &1 @9 59 9+ +3 +3 "! $0 6+2!8 9+) 8+3 4 + 2 3 25 D 6 9!" .9" 9+ @9"4+ 7"36" 8 ! 2 8+5" 32!6 +259+!8 2 3 3+ + 3+3 9+ @"!A" +!+ "!B 2.2 8 9+ 2 25A8 " 9+ !+25C " 2!6 12! +8 $>&0 9+ 255+1 +3 2 21C 1" B+ 28 3 !+5 "! " 9+ S !2 + 4"8 +! T 6B 28 B +!4 2 3 $>0P 9+ 7+52B+ 2 5" 5 4"! 9+ 8 !6 " 3 52 " 2 1"8 " @9 59 9+ @28 D+!6 4 + 24 2 3 @9 59 9+ 44+3 24B"8 1 " 9+ B+ " 9 8 3+2 9 4 9" .9 2 54288 524 19 4"4". 8 9 BC 8+4 " I B2 2 +3 92 9+ B+ @28 128 @9+ 9+ 54288 524 42 . 2.+8 @+!+ 3+8 +3 " 1+! "!B 9+ +J54 8 D+ "! +D+ 9+ 4+23 . 12! 9 .9+! +3 52 " 8 1 74 89+3 @! .8 2!+ 59 + 46 8 3 +8 " 9+ !++A 54288 58 +81+C 5 2446 " 42 "2 3 ! 8 " 4+ @ 9 @9"8+ 19 4"8"C 19 +8 9+ 923 2 1!" " 3 25R 2 2 5+

(? " 3+3 76 .!+3+! 5A 44 2B " ! 88 2 $>$> 7+ .@ 9 9+ +J5+1 " " 9+ D+!8 6 " 59 9+ 6" .+8 9+ +!B2 B1 !+ 81 + " 8 6" 9 8 9+ " ! 9 42!.+8 8 " " 9 .9+! 4+2! .9+ 5" !6 +!4 59 2 3 + 1I .24" + +J5++3 .! + !"44B+ 9+ 4+5 "! 2J B 4 2 !+3+! 5A " 3+3 2 2523+B6 2 " $000 @9 59 $0>= @28 !2 8 "!B+3 "2 8 " " D+!8 6 !2 A 7 + 6+2!8 42 +! 9+ !+ 59 "55 1 +3 9+ 5 6 2 3 9+ C 8 " @28 3 8"!.2 I+3 9+ 24 +8 27C 4 89B+ " 9+ D+!8 6 $>$> !+ 4+5 8 9+ 1"4 524 5" 3 " 8 " 9+ B+ 28B 59 28 9+ 8 " @28 + 3+3 " 5" 8 + 9+ 5+ +! "! 9 .9+! +3 52 " 9+ +@ @+8 +! 3 8 ! 5 8 " ! 88 2 2 +! 9+ @2! " 9+ 4 7+!2C " 9+ D+!8 6 "E326 54 3+8 25 4 +8 " !" +8 2 2 3 2 9"4 5 9+"4".6 42@ B+3 C 5 + 2 3 19 4"8"196 9+!+ 7+ .27" " ! B+8 28 B2 6 8 3+ 8 " 2 9" 5 28 " !" C +8 2 3 D 6 2.! 5 4 !24 859""4 8 288"C 5 2 +3 @ 9 9+ D+!8 6 9+ 4 7!2!6 5" 2 8 ;QP ### D"4 B+8 2 3 24B"8 $P## B2 85! 1 8 @9 4+ 9+ 2 24 +J1+ 3 !+8 2B" " 211!"J B2 +46 d=## ### B" .! 1!"B + 25 4 6 B+B7+!8 B26 7+ B+ " +3 +7 9! +45A+! !2 3 8 8594 +I ! 8 "! I ! 3 D" 594+.+4 +4B9"4 I M$>PPE $>P>G 2!4 B!"5A 2 3 294B2 BC 7+!" " +!B2 1! 5+8 54 3 .9+ 1!+8+ B1+!"!2 3 9+ !"@ ! 5+ 2 3 B1+!"! !+3+! 5A 8 3 +3 2 " ! .9+ @ +! 8+B+8 +! " $<#<E$<$# 9+!+ @+!+ 2 + 32 5+ ;P<> 8 3+ 8 3 8 ! 7 +3 28 "4C 4"@8 9+"4".6 =#; 42@ >#0 B+3 5 +;0# 2 3 19 4"8"196 Q#$> 233 " 9+!+ @+!+ Q>Q 2 3 "!8 + !"44+3

M$0Q#E$0<;G ? +B + @ 88 2 !24 8 2 3 18659"4". 8 11" +3 2 9+ 2.+ " Q# 2 5"!!+81" 3 . B+B7+! " 9+ !+ 59 523+B6 $0=Q 9+ 3 85"D+!+3 9+ B+ 9"3 " 9+ !+81 !2 " " 52 +!1 442!8 2 3 7 +! 4 +8 9+ 2 4 !+ " 9 8 +6+8 .9 4+3 9 B " 8 78 +2 9+ 8 36 " 9+ !+ 4+5 D+ 85 + 5+ +2 239+!+3 " 9+ 3"5 ! +2 " 9+ +B1 ! 524 "! . " A "@4+3.+ 9!" .9 9+ 8+ 8+8 2 3 9+ 3+1+ 3+ 5+ " B+ 24 4 +" 9+ +!D" 8 "!.2 8B 7 9+ 7+4 +D+3 9+ B B "!C 24 6 " 9+ 8" 4 2 3 9+43 2 B+ 21968 524 9+"!6 728+3 " + 7 I " 9+ "!.2 5 "43C .! " 9+ 5" 4+88 .+!B8 " @9 59 9+ D+!8+ 8 5"B1"8+3 !. 42! 2 3 5" " 8 "!3+! 9!" .9 8 55+88 D+ 8 2.+8 +2 8 255"!3 .46 5" +3 2B" .! 9+ 1!+5 !8"!8 " 2B2!5A 2 3 2!@ 8 @"!A8 54 3+ 0 9 % 1 $0=P 2 0) :) 1 $0=P 2 % 1 $0=P (%) 9 1 $0&#P) \ :) 1 $0&<

? ++ + *) !) + * + !) 6 ' ' + !&' * + !)

N M$0<$E$>&0 G ? +!B2 859"42! @9" 28 9+ " 3+! " 9+ 5"B12!2C D+ 8 36 " 42 . 2.+ "! 2 2 2 I 9+ 8 3 +3 "!27" ;6+2!8 2 2! 8 @9+ 9+ 923 2 "11"! 6 " 4+2! .! 27 5 2 3 +!8 2 9!" .9 9+ B+3 B " .!2BB2!8 2 3 !2 8E

=$P

@! .'2 3' 2! 9B+ 5' 9+8+' 859""48'@9 59'
@+!+' B2 2 +3' 76'. 8'2 3' 76' 2J+8' "' 9+'
5"B B 52 8' B7+!+3'"D+!'$## '$>>Q'@ 9'
27" ' ;=## 1 1 48' 8'2' ! 4+' 9+6' 23B +3'
" 46' 59 43!+ ' "' 9+' +!78' 7+4" . .' "' 9+'
! 9"3"J' !++A' 2 9
9+' !+D"4 " ' "' $>0P' !+8 4 +3' ' 9+'
8 !"E .2! 2 ' 8"D+!+ . 6' "' "8 2' 2 3'
+!!+."D 2' M$>>Q6' 2 3' ' 9+' !+23- 8 B+ 8'
92 ' "44"@+3' +3 52 " ' @28' 7!" .9 ' 3+!'
."D+! B+ ' 3 !+5 " ' 9+' !2 8 " ' @28'
B2!A+3' 76' 9+' 12882.+" ' 2' 42@' B2A .' 1! C
B2!6' 8 ! 5 " '"74 .2 "!6' '7" 9' 1!"D 5+8'
2 +' 5" !"4' " ' 859""48' 928' 7++ ' 288 B+3'
.!23 2446' 76' +J + 3 .' 2 3' "' +J 8 .' 859""48'
2 3' 76' "1+ .' +@' 859""48' ' 9+' 528+' "'
2 3+3' 859""48' 9+' 2 +' !+8+!D+8' 9+' ! .9 ' "'
288 8' ' 9+' "B 2 " ' "' +259+!8' 2 3' '
8"B+' 528+8' "' 1!+85! 7+' 9+' 5" !8+' "' 8 36'
9+' 42@' 81+5 +8' 92 ' 2 ' 8 ! 5 " ' 8924' 7+'
. D+ ' ' 9+' +!7"E !"2 2 ' 42 . 2.+
! B2!6' 59""48' ?0 9+!+'2!+' "@' " !'54288+8'
" ' 1! B2!6' 859""480 9+' 2 " 2' 859""48'5" C
8 8 .'" ' 9"8+'@9 59'92D+'7++ ' "1+ +3'!+5+ 46'
76' 9+' ."D+! B+ ' 2 3' !+"!.2 I+3' !+4 . " 8'
859""48' !A 89'5" +88 " 2' 859""48' " ' @9 59'
P>' 92D+' 7++ ' 7!" .9 ' "' 5" "!B 6' @ 9'
8 2 +' !+. 42 " 8' 2 9"4 5' 859""48' 2 3' 859""48'
" ' 9+' ! 9"3"J' !++A' 5" +88 " ' 8 B 42!' '
592!25 +!' "' 9+' 2 " 2' 859""48' 9+' B7+!'
" ' 859""48' ' 9+' !8' @"' 54288+8' '$<#0' @28'
$#&;'2 3' ' 9+'428' @"' @28'<> 9+'8 7-+5 8'
" ' 8 ! 5 " ' ' 9+' 2 " 2' 859""48'5"!!+81" 3'
"' 9"8+' "!' 9+' +4+B+ 2!6' 859""48' " ' 8 ! 2E'
.2!6' 59' 2 + " ' 9"@+D+!' 8'. D+ '
"' 2.! 5 4 !+' 4+D+' 9 .9+!' 1! B2!6' 859""48'
"!' . !48' 2!+' B2 2 +3' 2 3' 2' "!B2' 859""4'
"!' 9+' !2 .' " ' +259+!8'4"52 +3' 2' 2!2-+D" '
9+' 8+5" 32!6' 859""48' "!' 7"68' 5" 8 8 " ' P'
.6B 28 2' 2 3' $!+24859 4+' 9+!+' 2!+' 248"'
<' 4"@+!' 5"B B+!5 24' 859""48' 2' !++A' "! + 24'
859""4' 2 3' 2' 2 9"4 5' 8+B 2!6' "!' 1! +8 8'
" ' 9+'!+81+5 D+' 3+ "B 2 " 8' ' '

+ +!+ 5+0' ?
/ . !)) ' ' "8 2E +!I ."D +' ' 2! 8'H J1"C
8 " ' D+!8+44+' ')' ?) '
" 4288+' 0' 3 52 " ' 3+' L+ 2 F + E
8+ . +B+ ' 1! B2 !+F + 8+ . +B+ ' 3+8' 23 4 +2'
11'&>$E0$$' M 2! 8'$<#$G !+12!+3' !"B'" 5 24'
3"5 B+ 8'+J9 7 +3' 2 ' 9+' 2! 8' J1"8 " '$<##

' : ' ?
!+ 59' 1!+42 +' 2 3' "!2 "!' 7"! ' 2' -" '
+1 ' Q0' $&Q0F' +3 52 +3' 2' 9+' :+8 ' "4C
4+.+' " ' -" ' 2 3' 9+' D+!8 6' " ' 2! 8' "4C
4+.+' " ' 2D2!!+F 1!"B" +3' "' 9+' 1! +8 9""3'
2 3' "7 2 +3' 9 8' 3"5 "!2 +' '$&PQ'2 3' +8 27C
4 89+3' 28' 1! +8 ' ' + I ' +' !+B"D+3' "' 2! 8'
' $&P<'2 3' 2 ' " 5+'.2 +3' 2' !+1 2 " ' "!'
+4"R + 5+' 2 3' @28' ' .!+2' 3+B2 3' 28' 2'
1!+259+!' "!' 81+5 24' "5528 " 8' ' 9+' 6+2!'
$&&<' 9+' @28' 211" +3' 89"1' " ' " 3"B'2 3'
' $&0# 9+' @28' 59"8+' 76' " 8' % (' 28' 1!+C
5+1 "!' " ' 9+' 2 19 ' "!' $# 6+2!8' 9+'
3+D" +3' 9 B8+4' "' 9 8' 211" +3' 28A' 7
(' ' ;'0 . =$0
@ 9' 3 +!+ ' 8 55+88' 9+' 1! 5+' 425A+3'
27 4 6'2 3' 9+' 2 B' @28' "" 9 .9' "!' 9+' B2!A'
9+' 1+32.". 524' 142 ' @28' B1"8 .' 2 3' 9+'
!2 .+' " ' 8 3 +8' 5"B1!+9+ 8 D+' "88 +' 9 BC
8+4'288 B+3' B B+3 2 +' 3 !+5 " ' " ' 9+' 8 ! 5C
" ' ' 2 5 + ' 42 . 2.+8' ' 9 8 "!6' 2 3' '
19 4"8"196' +' 5"B1"8+3' 9 8' + %) ') '
') 1' 2' 4". 5' 2 3' 2' !+2 8+' 1" '
9+' 8 ! ' (' 7 ' ' (' ' ' (1' "!' 9+'
7+ + ' " ' 9 8' 1 1 4' +' 3+! ""A' "' 289 " '
9+' 592!25 +!' 3+D+4"1' 9+'- 3. B+ '2 3' !+ +'
9+' B 3' " ' 9 8' 1 1 4' @9 4+' 1!+12! .' 9 B' "!'
9 8' !+' 1!" +88 " '28' A .
"88 +' @28' 211" +3' 89"1' " ' +2 J' '
$&>$' 8' 859"42!89 1'2 3' 9 8' +4"R + 5+' B 23+/'
9 B' 9+' 25 24' 4+23+!' " ' 9+' 54+!.6' ' !2 5+'
+' @28' 24B"8 ' 5" 8 2 46' + .2.+3' ' 8"B+'
"!B' " ' !+4 ." 8' 5" !"D+!86' +' 3+ + 3+3'
9+'4 7+! 6' " ' 9+' 244 52 ' 9 !59 ' 7 ' 9+' 2!C
3+ 46' "11"8+3' 9+' !" +8 2 8' 8' 2 25A8'
1" ' 9+'_ + 8 5' 9+!+86'4+3' 9 B' "' 2' 7 +!'
5" 4 5 ' @ 9' & +4" ' @9 59' !+8 4 +3' ' 9+'
5" 3+B 2 " ' " ' 9+' 42 +!' 8' 4" .' 4 +' @28'
+ 8+46' 25 D+' 9!" .9" ' 8' 3+2 9' "5C
5 !!+3' 1!' $Q' $0#=' E

+ +!+ 5+8Q ?
0 !) .5 . :1.' ' ' " M 9 52." '$><#G
0 . .)' 0 .' :' ' / ' ' .. % 1 ("4' ' M " C
3" '$><QG

' ' ' ? 9+' 42!.+8' 5 6'
2 3' 9+' 521 24' " ' 9+' 8 2 +' " ' 288259 8+ 8'
2 3' 9+' 59 + ' 5"B B+!5 24' 5 6' " ' +@' .C
42 3' 5"!1"!2 +3' 28' 2'5 6' '$>QQ' '$<##'
9+' " 24' 1"1 42 " ' " ' 9+' 5 6' @28' P&# ><Q'
2 3' 8'+8 B2 +3' 1"1 42 " ' '$<#<' @28' &QQ E'
<0#' 8' 859""4 5+ 8 8' PE$P' 6+2!8' " ' 2.+' @28'
$#= $P# ' $<#<' 2 3' 8' " 24' 859""4 + !"44C
B+ ' @28' $$$ =P# ' 326' 859""48' 2 3' Q$ =#<'
' .9 ' 859""48' 9+' + !"44B+ ' ' 1! D2 +'
2 3' 12!"59 24' 859""48' @28' $& P&;' 233 " 24'
' 9+' " 24' 1"1 42 " ' ' $<##' ;P' 1+!' 5+ '
@+!+' "!+ . ' 7"! ' 2 3' Q' 1+!' 5+ ' 5"4"!+3'
' 9+' "!+ . E7"! ' 1"1 42 " ' ' $<##' ;P' 1+!'
5+ ' @+!+' ! 89' QP' 1+!' 5+ ' 2 23 2 8' >'
1+!' 5+ ' 88 2 8' 0' 1+!' 5+ ' 24 2 8' 2 3' /P'
1+!' 5+ ' +!B2 8
8 "!6' ?' ' 1!' $;' $&;P' 9+' 7+. .8'
" ' 9+' 1 74 5' 859""4' 868 +B' " ' "8 " ' @+!+'
B23+' 76' 9+' 12882.+" ' 9+' "44"@ .' "!3+!' 76'
9+' !++B+ ' " ' 9+' "/@ 0' C' A+@ 8+' ' @28'
9+ ' .+ +!2446' 2.!++3' 1" ' 92 ' " !' 7!" 9+!'
9 4+B" ' !B" '8924' 7+'+ !+2 +3' "' 7+5"B+'
859""4EB 28 +!' "!' 9+' +259 .' 2 3' ! ! .'
" ' 59 43!+ ' @ 9' 8 T' 9+' 859""4' 9 8' 8+' 1'
928' B2 2 +3' 2'5" " 8'+J 8 + 5+' 1' "' 9+'
1!+8+ ' 2 3' 928'4" .' 7++ ' A "@ ' 28' 9+' "8 " '
74 5' 2 ' 59""4' 8' 59 +' 5 " ' !"B'
9+' !8 ' 928' 7++ ' "' 1!+12!+' 7"68' "!' + !2 5+'
"' 2!D2!3' "44+.+' '$&=$' 9+' 5"B+' !"B'
++!' 842 3' @28' 8+ ' 28 3+' "!' 9+' 8 11"!' '
" ' 859""48' 2 3' ' $&&# 9+' + +!24' " ! ' " '
288259 8+ 8' .2D+' "8 " ' $### 25!+8' " '
42 3' "!' 9+' 82B+' 1 !1"8+' 6' $&>Q' 9+' 859""4'
+8 274 89+3' '$&;P' 923'7+5"B+' 8"' 5!"@3+3' 92

@"' " 9+!8' @+!+' +8 274 89+3 ' S' "' +259' 59 43!+ '
"' @! +' 2 3' "' 5 19+! T' 9+8+' @"' 859""48'
!+2446' B2!A' 9+' 7+. .' " ' .+ +!24' +3 52 " '
' "8 " ' 9+8+ ' 2 3' " 9+!8' +8 274 89+3'
42 +! ' 7+52B+' 9+' 8"E5244+3' !2B B2!' 59""48'
" ' "8 " ' @9+!+ ' B28 +!8' 2 .9 ' !+23 . '
81+44 . ' .!2B B2!' .+". !2196 ' 2 3' 9+' S' 9 .9+!'
7!2 59+8 T' "68' 3+!' 0' 6+2!8' " ' 2.+' @+!+' " '
23B +3' "' 9+B ' 2 3' 59 43!+ ' "D+!' 0' " 46' '
9+6' C' 5" 43' !+23' 9+' .4 89' 42 . 2.+' 76'
81+44 .' 9+' 82B+ T' !48' @+!+' " ' 23B +3'
2 ' 244' 4' $0><' 2 3' !" B' $0>< "' $>Q>' 9+6'
@+!+' 23B +3' " 46' 7+ @++ ' 1!' Q# 2 3'
5 ' Q#' ' $>Q>' . !48' @+!+' 2446' 23C
B +3' "' 9+' .!2B B2!' 859""48' " ' 9+' 82B+'
+! B8' 28' 7"68' ' $>;# ' 9+' 1!"5+88' " ' 8+. !+C
.2 .' 9+' 8+J+8' @28' 7+.
"!' B"!+' 92 ' 924' 2' 5+ !6' 9+' 859""48'
@+!+' 3+!' 9+' 5" !"4' " ' 2' 7"2!3' 5" B1"8+3' " ' 9+' 8+4+5 C
B+ ' 2 3' $Q' 233 " 24' 5" B B ++B+ ' +4+5 +3'
2 2446' 76' 9+' " D ' B++ . ' ' 9+' 5"!C
1"!2 " ' " ' 9+' 5 6' " ' "8 " ' ' $>QQ' 9 8'
7"2!3' @28' 3 81425+3 ' 2 3' 9+' 5" !"4' " ' 9+'
859""48' @28' . D+ ' "' 9+' >' 243+! B+ ' " ' 9+'
+@' 5 6' ' $>;P' 9 8' @28' 2.2 ' 592 .+3 ' 2 3'
9+' 5" !"4' " ' 9+' 859""48' @28' . D+ ' "' 2' 59""4'
"B B ++' 5" 8 8 .' " ' Q' 1+!8" 8' +4+5 +3'
2 2446' !" B' +259' " ' 9+' $Q' @2!38 ' @ 9' 9+'
26"!' 2 3' 9+' !+8 3+ ' " ' 9+' "B B" '
" 5 4' 6' ((% 1' 28' 233 " 24' B+B7+!8
' $>$>' 9+' "@ ' 211!"1! 2 +3' dP#### "!'
! B2!6' 59""48' 2 3' 3 !+5 +3' 9+' V 59""4'
"B B ++' "' +4+5 ' 2 2446' 2' 5+! 2 ' B7+!'
" ' 1+!8" 8' ' +259' @2!3' "' B2 2.+' 8' +J1+ 3 C
!+' 9+' .+ +!24' 59""4' "B B ++' 21C
1" +3' @92 ' @28' D ! 2446' 2' 8 75"B B ++'
5" 8 8 .' " ' ;' 5 I+ 8' !"B' +259' " ' 9+' $Q'
@2!38 ' 5" 8 +3' 9+B' 2' ! B2!6' 59""4'
"B B ++' 2 3' 288 . +3' "' 9+B' 9+' 28A' " '
1!"D 3 .' 1! B2!6' 859""48' 9+8+' 859""48' @+!+'
"' 7+' 2 .9 ' 76' @"B+ ' 24' 9+' 6+2!' !" 3'
@+!+' "' 23B ' 59 43!+ ' 28' +2!46' 28' =' 6+2!8' " '
2.+' 2 3' @+!+' "' 1!+12!+' 9+B' "!' 23B 88 " ' "'
9+' .!2B B2!' 859""48' ! B2!6' 859""48' @+!+'
255"!3 .46' "1+ +3' ' $>$<' 2 3' 9 8' 1! B2!6'
7"2!3 ' 76' 9+' 8 " ' " ' +@' 859""48' 2 3'
9+' 233 " ' " ' +!! "!6 ' !"8+' 8"' !21 346' '
B1"! 2 5+' 2 3' ' B7+!8 ' 92 ' 76' $>=<' '
923' 5!+28+3' !"B' ;&' "' $<# B+B7+!8 ' 2 3'
"8 " ' 923 ' ' + +5 ' @"' 859""4' 5"B B ++8 '
" +' "!' .!2B B2!' 859""48' 2 3' " +' "!' 1! B2!6'
859""48' 9 8' 5" 3 " ' 5" +3' 4' $>P=' '
@9+ ' 9+' ! B2!6' 59""4' "B B ++' @28'
27"4 89+3' 9+' 859""48' 5" 8"4 32 +3' 2 3' 2' +@'
859""4' 5"B B ++' ""A' 592!.+' " ' 9+' 859""48'
9 8' +@' 5"B B ++' 5" 8 8 +3' " ' 9+' 26"!'
2 3' 9+' !+8 3+ ' " ' 9+' "B B" ' " 5 4'
6' ((% 1' 2 3' " ' &' B+B7+!8' !"B' +259' " ' 9+'
$Q' @2!38 ' " +' 9 !3' "' 7+' +4+5 +3' 2 2446' 2 3'
"' 9"43' " 5+' "!' ;' 6+2!8' +259 ' 9+' "!. 2 I2C
" ' " ' 9+' 859""48' "' 3 8 ! 5 8 ' 2 3' 9+' 7"2!3'
"' 3 8 ! 5 ' 5"B B ++8 ' 8"" ' "44"@+3 ' 6
$>OP' 9 8' 7"2!3 ' 76' 9+' 2 +J2 " ' " ' +!! "!6 '
923' 5!+28+3' ' B7+!' !"B' OQH "' $$&' 2 3'
@28' 9+ ' 3 81425+3' 76' 2' 7"2!3' " ' Q=' +4+5 +3' 2 '
42!.+' 2 3' "!' ;E6+2!' +!B8 ' 2 3' @ 9' 9+' 26"!'
2 3' 9+' 92 !B2 ' " ' 9+' " 5 4' 28' 6' ((% '
B+B7+!8 ' ' $>P$' 9+' +4+5 " ' " ' 2' 1+! C
+ 3+ ' " ' 6' 59""48' @28' 2 9"! I+3' 76' 42@'
' $>O&' 9+' 211" B+ ' " ' 2' 7"2!3' " ' &' 288 8 C
2 ' 8 1+! + 3+ 8' @28' 2 9"! I+3 ' 5+'
92 ' B+' 9+' 1!".!+88' " ' 9+' 859""48' 928' 7++ '
!21 3 ' ' $<#$' 2' 59""49" 8+' +12! B+ '
@28' +8 274 89+3' 76' 42@' "' 5" 8 8 ' " ' ;' 8242! +3'
"B B 88 " +!8 ' @9"' 92D+' 592!.+' " ' 244' 859""4'
7 43 .8' 2 3' !+12 !8 ' ' $<#P' 9+' 59""4'
"B B 88 " ' @28' + !+46' !+"!.2 I+3' 76' 42@'
2 3' !+3 5+3' "' P' B+B7+!8 ' +4+5 +3' 2 ' 42!.+' 2 3'
"!' ;E6+2!' +!B8 ' " ' B"!+' 92 ' Q' ." .' " ' "
" 5+' 2 ' 2 6' " +' B+ ' ' $<#&' ! 9+!' 4+. 8C
42 " ' .2D+' 2' B "3+! ' 7 8 +88' "!.2 I2 " ' "'
9+' 868 +B ' @ 9' 2 9"! 6' 2 3' !+81" 8 7 4 6'
1!"1+!46' 1425+3
' $>Q$' 2' +@' 9 .9' 859""4' "!' 7"68 ' A "@ ' 28'
9+' .4 89' .9' 59""4 ' @28' "!.2 I+3' "!' 9+'
7+ + ' " ' 9"8+' " ' + 3 .' "' ." "' 5"44+.+'
9 8' 8' 8 2446' !+.2!3+3' 28' 9+' !8 ' 1 74 5'
9 .9' 859""4' ' B+! 52 ' ' $>PQ' 2' "!B24'
859""4' "!' . !48' @28' +8 274 89+3 ' ' @9 59' 2'
QE6+2!8L' 5" !8+' " ' !2 .' @28' " +!+3 ' 3+8 . +3'
"' 1!+12!+' . !48' "' 7+5" B+' +259+!8' ' 9+'
1 74 5' 859""48' " ' "8 " ' ' $>PP' 2' 9 !3'
6+2!' " ' 8 ! 5 " ' @28' 233+3 ' 2 3' 9+' 859""4'
@28' B23+' "' 2') !48' 9 .9' 859""4' 28' @+44' 28' 2'
"!B24' 859""4 ' ' $>OQ' 9+' 859""4' @28' 3 D 3+3'
"' @"' 859""48 ' ? ' 2' .9' 59""4' "!' . !48 ' 2 3'
"!B24' 59""4' "!' . !48 ' 6' 9+' 2 +J2 " ' " '
23-25+ ' +!! "!6 ' 2 3' 76' 9+' +8 274 89B+ ' " '
+@' 9 .9' 859""48 ' 9+' 5 6' "@' B2 2 8' $=
9 .9' 859""48 ' 0' " ' @9 59' 2!+' 5"+3 52 " 24'
9+' +592 5' ! 8' .9' 59""4 ' +8 274 89+3'
' $>><' 8" +' " ' 9+' 7+8 ' " ' 8' A 3 ' ' .9'
59""4' " ' "B B+!5+' "!' 7"68' @28' +8 274 89+3'
' $<#&' 2 3' 2' .9' 59""4' " ' !25 524' ! 8'
"!' . !48' ! ' +8 274 89+3' ' $<#0' ' $<#0' 2'
+12! B+ ' " ' 59""4' 6. + +' @28' 5!+2 +3'
"' 2A+' 592!.+' " ' 244' @"!A' ' 2 94+ 58' 1426'
9+24 9' B+3 524' 81+5 " ' !8+8' B 4 2!6'
3! 44' + 5' ' $<#>' 2' 5 6' 1+ 8 " ' 3' @28'
5!+2 +3' 76' 42@
!+8+ ' 59""4' 68 +B ' ? ' 9+' 859""4' 868 +B'
" ' "8 " ' 28' "!.2 I+3' 2 3' 5" 3 5 +3' ' $<#>'
8' 28' "44"@8' ?
' 9+' 9+23' 8' 2' 59""4' "B B ++' " ' P'
B+B7+!8 ' +4+5 +3' !"B' 9+' 5 6' 2 ' 42!.+' '
59""49" 8+' +12! B+ ' 5" 8 8 . " ' ;'
"B B 88 " +!8' 211" +3' 76' 9+' 26"!' 928'
592!.+' " ' 9+' 5" 8 ! 5 " ' 2 3' !+12 !' " ' 859""4'
7 43 .8' 9+' 59""4' "B B ++' +4+5 8' 2'
+5!+ 2!6' 8 +88' .+ ' 3 "!' 2 3' 2'
59""49" 8+' 8 "3 2 ' @9"' 9"43' " 5+' 3 ! .'
.""3' 7+92D "!' 2 3' + 5 + 56' 2 3' @9"' 211" '
9+ !' "@ ' 288 8 2 8' 8 7-+5 ' "' 9+' 211!"D24' " '
9+' 59""4' "B B 88 " +!8' 9+' 59""4' "BC
B 88 " +!8' 248"' 211" ' 2' 1+! + 3+ ' 2 3'
&' 88 8 2 ' 1+! + 3+ 8' @9"' "!B' 2'
"2!3' " ' 1+! + 3+ 8' 2 3' @9"' 9"43' " 5+

=$>

"!' &' 6+2!8)' +259' 9+' +5!+ 2!6' A++18' 24f !+5"!38' "' 9Hf 59""4f "B B 88 " +!8'2 3'"' 9+' "2!3' ' 1+! + 3+ 8f 5"B1 4+8' 24f !+1"! 8' 2 3' +3 8' 24f 1 74 52 " 8f 88 +8' 24f " 5+8' 2 3' 5+! 52 +8f 928' 5" !"4f "' 9+' " 5+8f 2 3' ' .+ +!24' "D+!8++8' 2 ' 54+! 52f @"!A' 5" +5 +3' @ 9' 9+' .+ +!24f 23B 8 !2 "' "' 9+' 859""48' 9+' 8 +88' .+ ' A++18' 2' 5"B14+ +' 8+' "' 7""A8' 89"@ .' ' 3+ 2 4' 24f !+5+ 1 8' 2 3' +J1+ 8+8' "' 9+' 859""48f 1!+12!+8' 24f 126!"448f +J2B +8' 24f 7 448' 1!+8+ +3' "!' 126B+ f 211!"D+8' 24f !+R 8 " 8f 8 7B 8' 2' B" 946' 8 2 +B+ '"' 211!"1! 2 " 8' 2 3' +JC 1+ 8+8' "' 9+' 59""4f "B B ++f 2 3' 1!+12!+8' 2 ' 2 24f 2 5 24f !+1"! ' 9+' 3 "!' 25 8' 28' 9+' +J+5 D+' "' 5+!' "' 9+' 59""4f "B B ++' "!' 9+' 1 !5928+' 8 "!2.+' 2 3' 3 8 ! 7 " '"' 24f 8 11 +8' !+R !+3' 76' 9+' 859""48f ! 89+8' 24f 8 114 +8' 28' ++3+3' 2 3' 2A+8' 2' !+5+ 1' "!' 9+' 82B+f "7 2 8' 7 38' "!' 24f 2! 54+8' ++3+3f 5+! +8' 28' "' 9+' 5"!!+5 +88' "' 2 ' 1 !5928+8' 2 3' 7 48f 2 3' 8 7B 8' 2 ' 2 24f !+1"!' ' "' 9 8' @"!A' 2 3' 2 ' 2 24f +8 B2 +' "' ++38' "' 9+' 59""4f "B B ++' 9+' 59""49" 8+' 8C "3 2 ' 25 8' "!' 9+' 59""4f "B B ++' ' 9+' 52!+' 2 3' 5 8 "36' "' 9+' 42 38' 2 3' 7 43 .8' 8+3' "!' 859""4f 1 !1"8+8f @ 9' 9+' 211!"D24f "' 9+' 59""4f "B B ++' 211" 8' !2 8 +!8' 8 81+ 38' 2 3' !+B"D+8' 2 ' -2 "!8' 2 3' + . C ++!8f 81+5 8' 244' 7 43 .8f 88 +8' !+R 8 " 8' "!' +4f 2 3' 2 ' -2 "!8/8 11 +8f 2 3' A++18' "' 4+' 2' 5"B14+ +' !+5"!3' "' 9+' 7 8 +88' "' 9 8' 3+12! B+ ' 9+' 1+! + 3+ ' "' 59""48' 8/9+' +J+5 D+' " 5+!' "' 9+' 59""4f "B B ++' @ 9' !+ +!+ 5+' "' 244f B2 +!8' !+42 .' "' C 8 ! 5 " ' 2 3' 3 85 14 +' ' 9+' 1 74 5' 859""48f B26' B2A+' 8 114+B+ 24f !+. 42 " 8' 28' 9+' 3++B8' +5+882!6f 25 8' 28' 92 !B2 ' "' 9+' "2!3' "' 1+! + 3+ 8' 2 3' 8 ! 5 8' 9+B' 28' "' 9+ !' @"!Af 211" 8' 2 3' !+B"D+8' 2 ' +259+!8' 8 7-+5 ' "' 9+' 211!"D24f "' 9+' "BC B ++f B26' !2 8 +!' "!' 8 81+ 3' +259+!8' 28' 9+' 8++8' f 928' "D+!8 .9 ' "' 9+' @"!A' "' 9+' ! 2 56' 3+12! B+ f 2 3' 8 7B 8' 2 ' 2 24f !+1"! ' "' 9+' E 59""4f "B B ++' 9+' "2!3' "' 1+! + 3+ 8' 928' 5" !"4f "' 9+' 5" !8+' "' 8 36f 1288+8' "' 244' 7""A8' 2 3' 2112!2 8' 1!"C 1"8+3' "' 7+' 1 !5928+3f 2@2!38' 244' 3 14"B28f 5" 3 5 8' 24f +J2B 2 " 8' "!' 5+! 52 +8' "' R 24 52 "' "' +259' ' 2 6' "' 9+' 859""48' "' 9+' 5 6f 88 +8' 24f 5+! 52 +8f 2 3' 2!!2 .+8' 9+' 4 8 8' "' +4 . 74+' +259+!8 9+' 859""4f 868 +B' 5" 8 8 8' "' $ "!B24f 859""4' $=' 326' 9 .9' 859""48' &=' 326' +4+B+ 2!6' 859""48' $#<' A 3+!.2! + 8' 2' 12!+ 24f 859""4' 2 3' 2' 859""4f "!' 9+' 8 ! 5 "' "' 9+' 3+2 ' &' +D+ .' 9 .9' 859""48' $=' +D+ .' +4+B+ 2!6' 859""48' 2 3' P' +D+ .' 3!2@ .' 859""48' !25C 52446' "' 59 43!+ ' 2!+' +J54 3+3' !"B' 859""4f 7+52 8+' "' 425A' "' 859""4f 255"B B"32 " 9+' 868 +B' +B 14"6+3' Q&0;' +259+!8' ' 9+' 326' 859""48' =#>' +259+!8' ' 9+' 81+5 24 2 3' +D+ .' 859""48' 2 3' $=>' 81+5 24f +259+!8' ?' 0>' "' @9"B' @+!+' ' 9" 8+9"43' 85 + 5+' 2 3' 2! 8' 2 3' =<' ' 3!2@ .' 2 3' B2 24f !2 .' Q>' 1426C .!" 38' @+!+' "1+ +3' 2 3' ;# 859""4f !8+8' @+!+' +B 14"6+3' ' $<#>' ' ! 2 56' +12! C B+ ' 2 3' 2' +12! B+ '"' 59""4f 6. + +' 2!+' B2 2 +3' ' 5 6' 1+ 8 "' 868 +B' 82772 C 524f D252 " 8' 6+2!8' "' !+8' "!' 4" .' 8+!D 5+' "' 126' 2 3' 2' 142 ' "' 1!"B" "' 728+3' "' +3 C 52 "' 2 3' !2 .' 2!+' 1!"D 3+3' !++' +J C 7""A8' 2 3' 8 114 +8' 2!+' 1!"D 3+3' ' 24f 859""48' 9+' 9 .9' 859""4f 868 +B' 8' +81+5 2446' 5"B14+ +' 9+!+' 7+ .' 2' "68f 2 ' 59""4' 2' !48f 2 ' 59""4' 2' "68f .4 89' .9' 59""4' 2' !48f .4 89' .9' 59""4' 2' "68f .9' 59""4f "' "B B+!5+' 2' "68f .9' 59""4f "' +592 5' ! 8' 2' !48f .9' 59""4f "' !25C 52f ! 8' 2 3' B J+3' 9 .9' 859""48' ' ! .9 " 92!4+8 "@ ' "!59+8 +!' 28' "8 " ' "JE 7 !6' " 9' "8 " ' 2 3' +8' "J7 !6' 5 6' "!B24f 59""4' "1+ ' 8 5+' $<#=' "' 7" 9' 8+J+8' 5"B14+ +8' 9+' 868 +B' 2 ' 9+' "1 9+' 5"8' "' 9+' 868 +B' "!' 9+' 2 5 24f 6+2!' $<#>E$<#<' @28' d; <P0 PP$' "' 5" .' +@' 859""4f 7 43 .8' 5" 8 ! 5 +3' @9 59' 5"8' dOO= E' <Q#233 " 24' 9 8' 2B" ' 8' 244 !2 8+3' 76' 4"524f 2J2 " ' 9+' !2 +' "' @9 59' @28' J+3' 76' 42@' '$<#$' 9+' " 24f 2J' 244"@+3' B 8' "' +J5++3' ;=' 5+ 8' " ' 9+' d$##' "' 9+' 2D+!2.+' D24 2 " "' 9+' 5 6' 3 ! .' 9+' ;' 6+2!8' B B+3 2 +46' 1!+C 5+3 .' ' 9 8' =' 5+ 8' B 8' 7+' 211!"1! 2 +3' "!' +@' 7 43 .8' 42 38' 2 3' ! !+' 2 3' Q P' 5+ 8' B 8' 7+' 8+3' "!' !+12 !8' 2 3' 24 +!2 " 8' 9 8' 4+2D+8' Q0 P' 5+ 8' @ 9' @9 59' "' 5" 3 5' 9+' + !+' 859""4f 868 +B' 2 ' 2B" ' 4"@+!' 92 ' 2 6' " 9+!' 288259 8+ 8' 5 6' 9" .9' 9+' B2J B B' 2B" ' 8' 4+D +3' 9+' 5!+28+' "' 1 1 48' ' 9+' 859""48' 2 3' 9+' 5!+28+3' 859""4f 25 4 +8' 1!"D 3+3' 2!' " ! ' 9+' 5!+28+' ' D24 2 " '"' 9+' 5 6' + @++ ' $<#$ 2 3' $<#>' 9+' 288+88+3' D24 2 " ' "' 9+' 5 6' 5!+28+3' $>0' 1+!' 5+ ' 9+' + !"44B+ ' ' 9+' 326' 2 3' +D+ .' 859""48' 5!+28+3' Q=' 1+!' 5+ ' 2 3' 9+' + ' 5"8' 1+!' 1 1 4f 5!+28+3' !"B' d;Q <&' "' d;= PQ' ! .' 9+' 82B+' 1+! "3' 9+' + !"44B+ ' / 9+U 9 .9' 859""48' @9+!+' 9+' 1+!' 521 2' +JC 1+ 8+' 8' 3" 74+' 9+' 2D+!2.+' "!' 9+' 868 +B' C 5!+28+3' !"B' 0 =>' 1+!' 5+ '"' 9+' " 24f + !"44B+ "' $# >>' 1+!' 5+ ' 9+' !+8 4' 8' 92' 9+' 59""4f "B B ++' 928' 7++ ' "!5+3' "' 23"1' 9+' B"8' ! . 3' +5" "B 6' "' + 274+' ' "' 5" 3 5' 9+' 859""48' V@ 9' 9+' 211!"1! 2 " 8' 2D2 4274+' 9+' +D+ C .' 4+5 !+' 868 +B' 928' 923' "' 7+' 272 3" +3f 9+' !+3 5 "' "' 9+' B7+!' "' 1 1 48' 1+!' +259+!' !"B' P# 2 3' &# "' ==' 28' 1!"1"8+3' 928' 923' "' 7+' 1"8 1" +3f 4""!8' 2 3' @ 3"@8' 2!+' V54+2 +3' 4+88' !+R + 46' 92' 9+6' 89" 43' 7+f 9+' 326' 3 8 ! 24f 859""48' 28' 1!"1"8+3' 52 "/' 7+' 8 2! +3f 2 3' 9+' 8242!6' 859+3 4+' "!' +259+!8' 8' + 32 .+!+3' ' 8' 1!"7274+' 92' 4+. 842 D+' !+4 +' @ 44f 8"" ' 7+' .!2 +3' ' '

+ +!+ 5+8' ?

B" .' 9+' B"!+' 8+ 4' 2! 54+8' 2 3' 7""A8' 2!+' 9+' "44"@ .' ?

) ' ' (' ' '% ' ' (' - 1

$>;' "' 32 +

) ' (' ' $ ' '% ' ' (' - 1 $>$>E$>P=

=$<

=Q#

; 9+48+2 .42 3 M$&0;G 9+48+2 8 24B"8 R + 2B" . 9+ +2!46 .2!3+ 8 9+ +J + " @9 59 "!.2 I+3 8 ! 5 " D2! " 8 7!2 59+8 " 1 !+ 2 3 2114 +3 7" 2 6 9+ .2!3+ @28 +8 274 89+3 76 9+ "5 + 6 " 1" 9+52! +8 " " 3" " 4 +8 8 B 42! " 9+ 1! D2 + .2!3+ 8 " 9+ 9+!724 8 8 3 +! . !"B 9+B 7+ . 8 11"! +3 76 2 1 74 5 8"5 + 6 @28 9+ !8 1 74 5 8 " " 8 A 3 " 3" " 2 3 8 "@ 9+ "43+8 8 +2!46 28 $&; ; 9+ "5 + 6 " 1" 9+52! +8 2 . !2 +3 2 2 2 4 S 9+!72! I . T @9 59 @28 3 85" C +3 2 +! 2 89"! 1+! "3F 7 2 +! 9+ "1+ C . " 9+ 9+48+2 .2!3+ 9+8+ 9+!72! I .8 @+!+ !+ +@+3 2 3 8"" ""A 9+ "!B " 2 3+B" 8 !2 " " 142 8 " 9+ B+B7+!8 76 9+ S +B" 8 !2 "!" 42 8 T $>Q< @++A46 3+B" 8 !2 " 8 @+!+ 7+. 5" +3 42!.+46 " 9+ 81+5 B+ 8 9+ B2 +! 2 B+3 52 3+12! B+ " 9+ .2!3+ "44"@+3 76 2 4+5C !+ 9+ 8 55+88 D+ 4+5 !+8 @+!+ 142 +3 " "!B 2 8 BB+!5" !8+ " 8 36 7" 2 6 9+ 4+8 " 9+ 4+5 !+8 " +5" !8+ @+!+ 28 "44"@8 F M$G 9+ 3 +!+ 868 +B8 " 7" 2 6 7" 9 2 !) 2 3 2! 5 24 12! 5 42!46 9"8+ " 2+ 8 2 3 : 88 + F MQG 9+ 8 ! 5 !+ 2 3 .!"@ 9 " 142 8F M;G 9+ 3 +!+ 12! 8 " 142 8 @ 9 9+ ! 3+85! 1 " 2 3 8+8 9+ 1!"5+88 " D+.+ 2 " F M=G 9+ 2 !24 2 3 59+B 524 2 2468+8 " D+.+ 274+ B2 +! F MPG 9+ B+3 5 24 8+ " 9+ B"8 B1"! 2 2! 54+8 9+ B2 +! 2 B+3 52 + 5 9+8+ 4+5C !+8 @+!+ @+44 2 + 3+3 76 B+3 524 8 3+ 8 2 3 @9+ 34+6 @28 B23+ !+5 "!" " 9+ 2!3+ #$ (%) / &1 2 3 !" +88"!" " 2 6 9+ 4+5 !+8 @+!+ 9+43 @ 5+ 2 @++A 2 >0;# ! ' 26 /: + 2 3 : 46 8 +23 " @++A46 2 $# ! ' !"B 26 " +1 +B7+! 9+ 54"8+ " 9 8 5" !8+ 2 +J2B 2 " @28 . D+ "1 " 24 " 9+ 8 3+ 8 2 3 2 ."43 B+324 @"! 9 + . +28 2@2!3+3 " 9+ 52 3 C 32 + 2 2 . 9+ 9 .9+8 .!23+ 9+ 2@2!3C . " 1! I+8 7+.2 $>;# @28 3 85" +3 $>P; 7 8 78+R + 46 !+ +@+3 8 +!+8 C . " " + 92 2B" . 9+ 8 55+88 4 5"B1+ C "!8 @+!+ J4+6 28 +!8 2 3 28 2 9+ S 4+8 2 3 +. 42 " 8 28 " 3B 8C 8 " " 9+ 2!3+ +5 !+ "B 2 3 27"!2C "!6 T 88 +3 "D Q# $<#Q @28 8 2 +3 92 0 S 9+ 1 !1"8+8 "! @9 59 9+ 9+48+2 968 5 2!3+ 8 B2 2 +3 2!+0 M$G "! + 3+! 288 8 2 5+ 9+ +259 . " 7" 2 6 F MQG " 1!"D 3+ B2 +! 24 2 3 "11"! 6 "! " 2 524 D+8 .2 " 8F M=G +259+!8 9"43 . 5A+ 8 " 23B 88 " @ 44 7+ 244"@+3 " !"3 5+ 9+ ! 8 3+ 8 " 9+ 2!3+ "!1 !1"8+8 " 8 36 7 +259 +259+! @ 44 7+ 9+43 !+81" 8 74+ "!2 6 32B2.+ 92 B26 7+ 5"BB +3 76 9 8 "!9+!8 3+ 8 @9 48 9+ 2!3+ T 3 D 3 24 8 3+ 8 2 3 54288+8 @ 9 +259+!8 2A+ 23D2 2.+ 42!.+ B7+!8 " 9+ "11"! +8 " +!+3 2 3 233 " 81+5 C B+ 8 2!+ ! 89+3 " +259+!8 "!54288 8+ = +@ M$0P<G 9+ 2B" 8 +@ .2!3+ 8 32 + !"B 9+ 211" B+ " 44 2B " 2 1 1 4 " 9+ 9+48+2 2!3+ " "!.2 I+ 2 1968 5 .2!3+ "!9+ ! 5+88 . 8 2 " 2J+E " 92 "@2.+! ! 5+88 " 24+8 9+ "! 2C B+ 24 .2!3+ 2!" 3 9+ !"624 !+8 3+ 5+ @28 4 I+3 "! 9 8 1 !1"8+ 9+ " 46 "!B24 +3 52 " 24 @"!A 2 +@ 8 9+ !2 . " .2!3+ +!8 7 9 8 8 9"!" .946 "!.2 I+3 2 3 D+!6 B1"! 2 "! +@ 8 9+ 8" !5+ " .2!C 3+ +!8 "!B"8 " 9+ 5"4" 24 .2!3+ 8 D+ 6+2!8 " 1!25 524 +J1+! + 5+ 2!+ !+R !+3 "! + !2 5+ 1" 9+ 5" !8+ @9 59 54 3+8 4+5C !+8 1968 58 59+B 8 !6 M28 !+42 +3 " 7" C 2 6 2 3 .+"4".6G .+ +!24 7" 2 6 +5" "B 5 7" C 2 6 2 3 .+".!219 524 7" 2 6 259 8 3+ 8 !+R !+3 " 5"44+5 2 9+!72! B " QP# 2B+3 2 3 B" +3 81+5 B+ 8 2 3 9 8 @"!A 8 82 8 25 "!6 9+ !+5+ D+8 2 +@ 5+! 52 + 2 9+ + 3 " @" 6+2!8 +@ !+B2 +3 2 1! D2 + 1"88+88 " " 9+ !"@ 4 $>=#@9+ @28 B23+ 2 1 74 5 .2!3+ @ 9 ! 44 2B ""A+! 28 9+ !8 3 !+5 "! P 3 7 !.9 M$0&;G 9 8 .2!3+ 8 2 12! " 9+ D+!8 6" 3 7 !.9 928 B 8+ B8 54288!""B8 2 3 427"!2 "! +8 @9+! B"8 " 9+ 8 ! 5 " 7" 2 6 9+ D+!8 6 8 . D+ & 2!D2!3 M$>#PG 8 274 89+3 2 3 5" C +3 1! B2! 46 " ! 9+! 7" 2 524 +259 . 2 3 !+8+2!59 2!D2!3 D+!8 6 0 + I"!. :2D2 M$>$0G 9+ L8 2 38 42 + B 2 + I"!. 8 9+ +8 7" 2 C 524 .2!3+ 9+ @"!43 928 @+44 +R 11+3 427"!2 "! +8 "! !+8+2!59 2 7" 2 524 4 7!2!6 " "D+! =# ### D"4 B+8 2 3 " 42!.+ 7 43 . 3+D" +3 +J54 8 D+46 " 427"!2 "! +8 "! D 8 . 7" 2 8 8 !"B " 9+! 5" ! +8 +! 2 !"C 1+2 ."D+! B+ 8 8+ 3 2 2446 2 8 3+ " B + I"!. 2 3 " 9+! 5" ! +8 2!+ !+1!+C 8+ +3 2 !!+. 42! +!D248 9+ @"!A 8 24B"8 + !+46 !+8+2!59 > 88" ! " 8 " M$>P<G 9+8+ .2!3+ 8 2!+ A "@ 4"52446 28 S 92@L8 2!C 3+ 8 T 9" "! 9+ 3+! + !6 92@ B" . 9+ "7-+5 8 2B+3 9+ + 25 B+ 92 +8 274 89+3 9+ .2!3+ 8 9+ 3 88+B 2 " 2B" . B+ " 2 A "@4+3 + " 142 8 S 76 92DC . 2 5"44+5 " 9+!+" +28 46 255+88 74+F 76 9+ +8 274 89B+ " " 2 B 8+ B 2 3 4 7!2!6 5" +5 " 9+!+@ 9 2 3 248"" 76 9+ +8 27C 4 89B+ " 1 74 5 4+5 !+8 2 3 8 ! 5 " 1" 7" 2 6 2 3 8 244 +3 85 + 5+8 T $>>P 9+ 82B+7+ + 25 "!+ 3"@+3 9+ + !6 92@ 59""4 " " 2 6 2 289 . " D+!8 6 " 8 2 3 1!"D 3+3 "!9+ 5""1+!2 " " 9 8 859""4 @ 9 9+ 7" 2 524 .2!3+ 9+ 1!" +88"! 9+ 92@ 59""4 " " 2 6 8 9+ 3 !+5 "!" 9+ .2!3+ 233 " " 8+!D . 9+ ++38 " 9+ 8 3+ 8 2 3 8 2 " " 9+ 92@ 59""4 " " 2 6 9+ .2!3+ .!" 38 2!+ "1+ " 9+ 1 7 5 2 3 9+ " 3+!L8 @ 44 1!"D 3+8 92 9+!+ B 8 7+ 1!+259+3 2 2 24 8+!B " 9+ 1"@+! @ 83"B 2 3 ""3 +88 " "3 28 89"@ " 9+ .!"@ 9 " 4"@+!8 ! 8 2 3 " 9+! 1!"3 5 8 " 9+ 142 @"!43 9+ 5"44+5 " 8 2!+ !++46 8+3 76 9+ +259+!8 @ 9 9+ ! 54288+8 2 !+8 36

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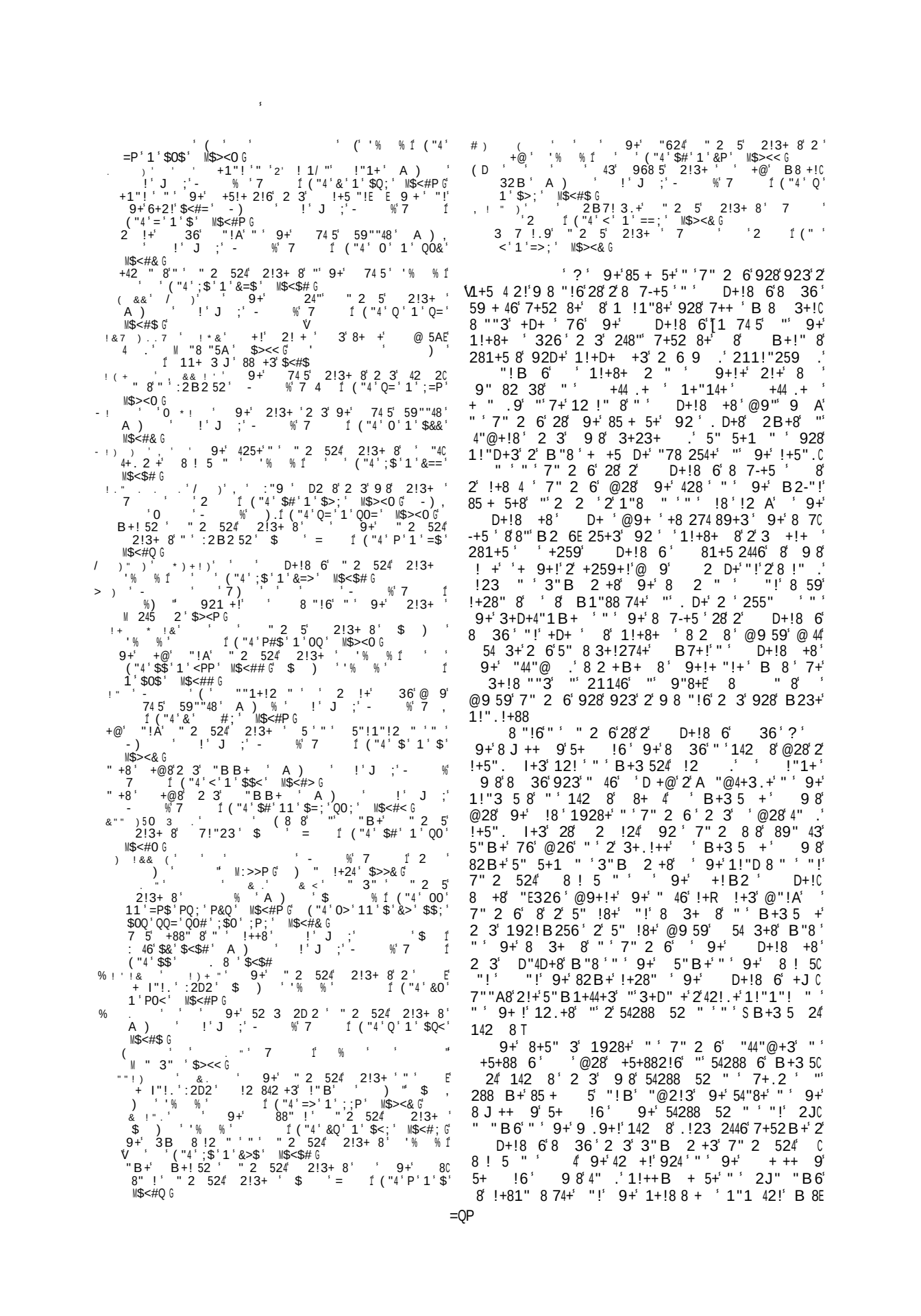

5" 5+1 " ' " ' 9+' 1 !1"8+' " ' 7" 2 524 8 ! 5C
" ' ' 25 ' 9+!+' 2!+' +D+ ' 6+ ' D+!8 +8'
92 ' !+1!+8+ ' " 46' 9 8'8+5" 3' 1928+' " ' 7" 2 6 '
' B 8 ' 7+' 3+!8 ""3' 92 ' 9+' 211+2!2 5+' " ' 2'
+@' 1928+' " ' 7" 2 524 8 ! 5 " ' 3 3' " ' C
D"4D+' 9+' 272 3" B+ ' " ' 9+' "43+!' 1928+8 '
"!' 9+6' 92D+' 7++ ' 52!! +3' "!@2!3' 5" C
" 846

5+' @92 ' B 26' 7+' 5244+3' 9+' 2J" "B 5' +!2'
" ' 7" 2 524 8 ! 5 " ' ' B+! 52 ' D+!8 C
+8' @28' 2' " 274+' " +' ' B 26' 7+' 8+3' 28' 2 '
44 8 !2 " ' 9+' 3"B 2 .' 4 + 5+' ' 9 8'
8 ! 5 " ' @28' 92 ' " ' 82' !26 ' @9"8+' +J C
7""A8' 2 3' B2 248' @+!+' B"3+48' " ' 54+2! +88'
2 3' 5" D+ + 5+ ' 9+' +J 8' @+!+' + 3+3' "'
B 2A+' 8 3+ 8' 2B 4 2!' @ 9' 9"8+' 25 8' 2 3'
9+ !' +!B "4".6' @9 59' @" 43' + 274+' 9+B' "'
8+' 9+' B2 24 ' 9+' 3+ 52 " ' " ' 142 8 '
8 2446' 9+'8 3+ ' @28' !+R !+3' "' 5"44+5 ' 2 3'
3+ 6' 2' 5+! 2 ' B7+!' " ' 9+' 142 8' " ' 9+'
+ .97"!9""3 ' 2 3' "5528 " 2446' "' 1!+8+!D+'
9+8+' 142 8' ' @92 ' @28' 5244+3' 2' S 9+!72! B T'
9 8' A 3' " ' 8 ! 5 " ' 211+24+3' "' D+!6' +@'
5"44+.+8' 2 3' D+!8 +8' " ' P# "!' +D+ ' ;#
6+2!8' 2."' 28' 3+8+!D .' 9+' !+5". " ' " ' 2' 3 8C
5 ' 1!" +88"!89 1 ' ' 528+' ' @28' !+5". I+3'
2 ' 244 ' ' @28' . D+ ' 28' 2' 89"!' 5" !8+' 76' 8"B+'
8 ! 5 "!' @9"8+' 59 + ' 8 7-+5 ' @28' 8"B+ 9 .'
+48+' 2 !2446' 9+' 8 7-+5 ' @28' B "!+' 5" 81 5C
" 8' 2B" .' 9+' 28 +! ' 5"44+.+8' 2 3' D+!8 C
+8' 92 ' 2B" .' 9+' +8 +! ' 2 3' 1+!9218' "!'
9 8' !+28" ' 9+' B"!+' B"3+! ' 1928+8' " ' 7" 2 6'
92D+' " ' 7++ ' !+5". I+3' 8"' !21 346' 76' 9+'
"!B+!' 8 " 8' 28' 76' 9+' 42 +!
9+' B"3+! ' 1928+' " ' 7" 2 6' @28' !"3 5+3'
76' 9+' @"!A' " ' " B+ 8 +!' @9 59' $# 6+2!8'
42 +!' M$>P<G' @28' 8 114+B+ +3' 76' 9+' 8 B 42 C
.' + +5 ' " ' 2!@ l8' ' (' ' % " '
25 ' B "3+! ' 7 "4".6' ' 9+' D+!8 +8' B 26'
7+' 82 3' "' 32 +' !"B' 9+' 211+2!2 5+' " ' 2!@ l8'
7""A' 27"!2 "! +8' 8 114 +3' @ 9' 5"B 1" 3'
B 5!"85"1+8' 2 3' 9+ !' 255+88"! +8' 7+52B+' 2 '
+88+ 24 12!' " ' 9+' +R 1B+ ' " ' D+!8 +8'
2 3' 7 "4". 524 @"!A' !"B' 9+' +@' 1" ' " ' D +@'
7+52B+' +8 274 89+3' 9 8' B "D+B+ ' @28' +4 '
!8 ' ' 9+' +!B2 ' D+!8 +8' 2 3' @28' 3+D+4C
"1 .' 9+!+' "!' 2 ' 4+28 ' ;# 6+2!8' 7+ "!+' '
7+52B+' " 5+274+' ' B+! 52 ' D+!8 +8' '
9+' B+ 9"3' " ' !"3 5 " ' " ' B "3+! ' 7" 2 6'
"' B+! 52 ' 8 " 8' @28' "! 2 +' '
9+' 8+ 8+' 92 ' ' 4" .' 3+426+3' 2' 1!"1+!' !+5".C
" ' " ' 9+' 8 7-+5 ' ' 52B+' ' 28' 2' 12! ' " '
.+ +!24 5" !8+8' ' 7 "4".6' M. [G' 9+' +J 8' 2 3'
427"!2 "!6'. 3+8' "!' @9 59' @+!+' 24@268' @! + '
76' I""4". 8 8 ' 8' 2' 5" 8+R + 5+' I""4".6'
!+5+ D+3' 8"' B 59' 9+' .!+2 +!' +B1928 8' 92 ' "'
9 8' 326' ' 8' 9" .9 ' " ' 28' 86 " 6B" 8' @ 9'
7 "4".6 ' 2 3' 7" 2 6' 42..+3' 7+9 3' ' 3+D+4"1C
B+ ' 2 3' '!+5". " ' 9+' !+24 8+.!+.2 " '
" ' 7" 2 6' !"B' 2 B24 7 "4".6' ' D+!8 6'
5" !8+8' 7+.2 ' @ 9' 9+' 211+2!2 5+' " ' +88+6L8'
- 'M$>>#G' @9 59' @28' ' + +5 ' 9+' !"3 5C
" ' " ' 259L8 .)% ' "' B+! 52 ' 427"!2C
"! +8 ' 5+' 92 ' B+' 7" 2 524 427"!2 "! +8'
2 3' +J 8' 92D+' B 4 14 +3F ' " +' 8 "
2 +!' 2 " 9+!' 7" 2 6' 928' +B+!.+3' !"B' 8' I""C
4". 524 8 7B+!.+ 5+F 2 3' 24 9" .9' 3+426+3 ' '
928' "@' 7+5" B+' +8 274 89+3' ' B"8 ' D+!8 +8'
28' " +' " ' 9+' B2-"!' 8 7-+5 8
!+8+ ' 523+B 5' 2 8' " ' " 2 6' ? ' '
9+' +!B2 ' D+!8 +8' 7" 2 6' 8'2 ' +8 274 89+3'
8 7-+5 ' " ' 9+' !8 ' !2 A' @ 9' 8' 8 2 ' " ' C
8 ! 5 "!8 ' 2 3' 8 2446' 8' 8+12!2 +' 7 43 .8 '
"' 9+8+' 427"!2 "! +8' "!' B2 6' 6+2!8' 9+'
B+! 52 ' 8 3+ ' @+ ' "!' 9+' 81+5 24' !2 .'
9+' 5" 43' !+5+ D+' ' "' " 9+!' 5" !6 ' 8' 2'
5" 8+R + 5+' 9+' 61+' " ' 7" 2 524 8 ! 5 " '
' B+! 52 ' D+!8 +8' 928' 9+' 81 ! ' ' " ' 244
9+' B+ 9"38 ' " ' 92 ' . D+ ' ' +!B2 ' D+!C
8 +8 ' 9+!+' 2!+' D+!6' +@' .+ +!24 5" !8+8' ' 9+'
+!B2 ' D+!8 +8' +J5+1 ' 9"8+' . D+ ' "' 9+'
42!.+' .!" 18' " ' B+3 524 2 3' 192!B 256' 8 3+ 8'
9+' " 9+!' D+!8 6' 8 3+ 8' +4+5 .' 7" 2 6'
7+ .' 8+ ' 2 ' !+8+2!59' 24B "8 ' 2 ' " 5+ ' '89" 43'
7+' !+B+B 7+!+3 ' 9"@+D+!' 92 ' 8 59' 8 3+ 8'
92D+' 923' ! ."!" 8' +4+B+ 2!6' !2 .' 7" 2 6'
' 9+' .6B 28 B ' @9 59' 8' 1+!9218' B "!+' 92 '
+R D24+ ' "' 9+' 2D+!2.+' 2B " ' " ' 3+!.!23C
2 +' 8 ! 5 " ' ' 7" 2 6' ' B+! 52 ' 5"4C
4+.+8
' 9+' ! 89' D+!8 +8' 9+' 44' !+5". " '
" ' 7" 2 6' 928' 3+D+4"1+3' D+!6' 84"@46 ' 2112!+ 46'
" + ' 7+ .' "4+!2 +3' !2 9+!' 92 ' + 5" !2.+3 '
9+' + "!B" 8' 7"36' " ' ! 89' 5" 8+!D2 8B '
+81+5 2446' ' +3 52 " ' 928' . D+ ' 7" 2 6' 2'
592 5+' ' 9+' D+!8 +8 ' 7 ' 92!346' @92 '
5" 43' 7+' 5244+3' 2 ' "11"! 6' 9+!+' 2!+'
@"' "!' 9!++' " 274+' +J5+1 " 8' "' 9 8' 8 2 +E
B+ ' 2 3' 9+6' 2!+' 9+' 1!"B 8+' " ' 2' B "!+' .+ C
+!24 !+5". " ' 9+!+' 2!+' 7" 2 524 8 ! 5C
"!8' ' 9+' D+!8 +8 ' 7 ' 9+' +R 1B+ ' 2 3'
9+' 8 ! 5 !+' " ' 9+' 5 !! 5 42' 3"' " ' + 5" !2.+'
2 3' 8"B+ B+8' 3"' " ' 1+!B ' 8 3+ 8' "' + +!'
5" !8+8' ' 7" 2 6 ' ' 81 +' " ' 9 8' 2 3' 1+!C
9218' 7+52 8+' " ' 9 8' 9+' ! 89' 7" 2 8 8 ' C
9 3+!+3' 76' 42!.+' .!" 18' " ' 8 3+ 8' 92D+'
7++ ' 3" .' " 274+' @"!A' ' 9+' 23D2 5+B+ '
" ' 9+' 85 + 5+
' 9+' !+ 59' D+!8 +8' 7" 2 6' 928' 2'
3+ +' 1425+' 7 ' ' 8' 2A+ ' 59 + 46' 76' 8 3+ 8'
" ' B+3 5 +' 2 3' 192!B 256 ' 9+' 54288 52 " '
2 3' B+3 5 24 8+8' " ' 142 8' 2!+' 2 .9 ' @ 9'
.!+2 ' 5"B 14+ + +88' 2 3' 8A 44 ' 7 ' 9+' B "3+! '
1928+8' " ' 7" 2 6' 92D+' B 23+' 84"@' 1!".!+88 '
9+' 1+5 4 2!' !+42 " ' " ' 9+' !+ 59' D+!8 +8'
"' 9+' D+!8 6' " ' 2! 8' 928' !+1!+88+3' 3 C
D 3 24 2 D+' '3+D+4"1 .' 7" 2 524 8 ! 5C
" ' @9 59' 8' B"!+' 2' B2 +!' " ' 1!+85! 7+3' "!B'
92 ' " ' 1+!8" 24 "1 "
' B+! 52 ' D+!8 +8' 9+' +@+!' 1928+8'
" ' 7" 2 6' 2!+' @+44 !+1!+8+ +3' ' 8 ! 5 " '
2 3' ' B "8 ' 8 " 8' @+44 3+D+4"1+3' 3+C
12! B+ 8' " ' 7" 2 6' 2!+' "!.2 I+3' 9+!+' 2!+'
.!+2 ' D2! 2 " 8' ' 9+' 2B " ' " ' 3+!.!23 2 +'
@"!A' " +!+3' ' 9+' 1928+8' " ' 9+' 8 7-+5 '
+B1928 I+3 ' 2 3' ' 9+' !+R !+B+ 8' "!' .!23 C
2 +' @"!A' 7 ' 9+!+' 8' 24@268' +D 3+ ' 9+' 2 C
+B 1 ' "' A++1' 125+' ' 8 ! 5 " ' @ 9' 9+'
.!") 9' " ' 9+' 85 + 5+' ' 9+' "!.2 I2 " ' " '
7" 2 524 @"!A' ' B+! 52 ' D+!8 +8' 9+!+

2!+ @"3 8 5 9+"! +8 28 +D 3+ 5+3 76 9+ !+8 4 8 +B 12! 5 42!+43"7" 2 524 25 D 6 "!+ D+8 .2 "211" "9+8 2 8 ! 5 "!8 !2 +3 9 8 +43 2 3 "B2A+244 8 ! 5 " '" 9+!1928+8 " 9+ 8 7-+5 +4+B+ 2!6 2 3 5 3+ 24 8 59 2 D+!8 6 9+7" 2 524 8 3+ 8+5 !+8 D+!6 8 1+! "! 8 ! 5 " " 2 +! "! .!23+ 9+ " 9+! 1928+8 " 9 8 8 7-+5 2 3 2 3 8 "! +3 1+!81+5 D+ " 7" 2 6 .+ +!24 9+" 9+! 9+"!6 8 "211" "9+8 2 !+1!+8+ 2 D+8 " 244 " 9+ B2-"! +438 " 25 D 6 "1 244 " 9+8+ 1928+8 " 9+ 8 7-+5 1" 2 +R 24 "" . 8 ! 5 " 2 3 "11"! 6 "! !+8+2!59 8 59 2 D+!8 6 9+7" 2 524 8 3+ 8+C 5 !+8 8 1+! "! 8 ! 5 " 8+D+!24 1928+8 " 7" 2 6 2 3 2 2 !46 ! +1+!81+5 D+ " 7" 2 6 .+ +!24 !"B 9+ 8 2 31" " !+8+2!59 9+ "!B+! "!.2 I2 " 928 8"B+ 23D2 2.+8 7 +D+ 8 59 5" 3 " 8 !+8+2!59 425A8 9+ 59+5A8 92 " 9+!1928+8 " 9+ 8 7-+5 24@268 8 1146 !"B 9+ 8 2 31" " 9+ 8 3+ "7+ 8 ! 5 +3 2 3 . 3+3 "!+8+2!59 9+ 42 +!"!.2 I2 " 928 3 8 5 23D2 2.+8 9+ B"8 8 ! A .5" !28 7+ @++ !"C 1+2 2 3 B+! 52 D+!8 +8 +R 1B+ "!7" 2 524 8 ! 5 " 8 9+7" 2 524 .2!3+ D+!6 !"1+2 D+!8 6 928 8 59 2 .2!3+ 28 2 +88+ 24 12! " 8 +R 1B+ 8 ! + 92 9+ 7" 2 5 .2!3+ @28 3+D+4"1+3 7+ "!+ 9+ 427"!2 "!6 2 3 2 8+ 8+ 8 2 9+! 2 5+ !"B 9+ "43+!1928+8 " 7" 2 6 " + 9+ 4+88 8 !+.2!3+3 248"" 28 2 :) 7" 2 524 8 ! 5 " 2 3 D+8 .2C " " 9+ B"8 B"3+! A 3 B+! 52 D+!8 +8 9+ 427"!2 "!6 3+D+4"1+3 !8 2 3 8++B8 B1"88 74+ 28 6+ "!7"2!38 " 5" !"4 2 3 12 !" 8 "211!+5 2 + 92 2 7" 2 C 524 .2!3+ 8 2 6 B"!+ 92 2 + 2+8 9+ 5 21C 1+ 32.+ D+!8 6 3+12! B+ " 7" 2 6 @ 9" 427"!2 "! +8 8 "@ 5" 5+ D274+ 7 @ 9 9+ B"!+ !+5+ 3+D+4"1B+ 8 " 9+ 8 7C -+5 2 7" 2 5 .2!3+ 8 +R 2446 +5+882!6 2 3 8 278+ 5+ " .9 "7+ +R 2446 5" 5+ D274+ 8 9+ 425A " 8 59 +R 1B+ 92 928 7+5"B+ 2 8+! " 8 B+ 25+ "9+ 8 2 3 .5" B+! 52 D+!8 +8 7" 2 524 8 ! 5 " 2 3 D+8 .2 " 9+ +!+ 2 " 6 ? + +!+ 5+ 928 7++ B23+ "9+ B2 6 281+5 8 " 7" 2 6 2 3 8 5+ 9+8+ 281+5 8 3 +!+ 2 + D+!8 6 8 ! 5 "!8 2 3 8"B+ B+8 D+!8 +8 8 B1"! 2 "3 52 + 9+B 9 8 B"3+! 3+D+4"1B+ " 9+ 8 7-+5 7+.2 27" $>&#"44"@ .5 2 1+! "3" !+D"4 " 2!6 3+28 92 5 4B 2 +3 2!@ l8 (' % "+"!+ 92 B+ 9+ 2J" "B6" 142 8 "!B+3 9+ 3"B 2 12! " 7" 2 524 8 ! 5 " 2 3 !+8+2!59 2 3 2J" "B6 @28 9+ .! 1 " 9+ 3".B2 " 9+ 5" 8 2 56 " 81+5 +8 9+ +8 274 89B+ " " "!.2 5 +D"4 " 28 2 @"!A .5 961" 9+8 8 " " 46 !2 8 "!B+3 2J" "B6 7 248"" .2D+! 8+ "" +@ 1928+8 " 7" 2 6

9+ +@ 6 25+8 9+ 1!"74+B " D2! 274+ 81+5 +8 @9"8+ 4 5 2 " 8 + 72 4+ 9+ 2 +B1 8 "3+ +9+ !7" 32! +8 8 2 +B1 .5 "2!!2 .+ 9+8+ 5" 8 2 81+5 +8 2 !24 .!" 1 .8 @9 59 "@ B+2 .!" 1C .8 " 9+ 728 8 " 5"B B" 3+85+ 9 4+ 2 5+! 2 8+ 8+ 9+!+ "!+ 9+ "43 8 7-+5 " 2J" "B6 1+!8 8 8 9+ B"3+! 1+! "3 2 3 B 8 5" +" 1+!8 8 2 D+!6 !+24 8+ 8+ 8 2 +@ 8 7-+5 @ 9 BB+ 8+46 B"!+ 3 C 5 4 1!"74+B8 2 3 2 3 +!+ 1 !1"8+ D+ B"!+ 8 . 52 9"@+D+! 8 9+ ! 8+ 2 3 3+D+4"1B+ " B"3+! 1 @9 59 928 3"B 2 +3 7" 2 524 8 ! 5 " 2 3 !+8+2!59 "! B 59 " 9+ B"3+! 1+! "3 8 8 5 46 2 +D"4 " 2!6 8 7-+5 8 5" !"4C 4 .1 !1"8+ 7+ .5 "! D+8 .2 + 9"8+ 42!.+ !+42 " 89 18 @9 59 @ 1+!B 9+ 5" 8 ! 5 " 2 255" "9+ D"4 " 9+ 142 A .C 3"B 7! + 8 "1 5 8 9+ +D"4 " 142 8 "!19"4".6 "7 2 +3 8 +8 B" 6 !8 !"B 2 5"B12!2 D+ 8 36 " 9+ 8 ! 5 !+8 " 4 D .142 8 2 3 B"8 8+!D 5+274+ 2B" 9+8+ 8 ! 5 !+8 @+!+ " 3 "7+ 9"8+ 5" C +5 +3 @ 9 !+1!"3 5 " 9+!+ "!+ 9!" .9 B 59 " 8 9 8 "!6 B"!19"4".6 928 7++ 9+ 5"B12!2 D+ 8 36 " !+1!"3 5 D+ 8 ! 5 !+8 9+!+ 92D+ 7++ 2 4+28 9!++ " 274+ +J12 C 8 " 8 " B"!19"4".6 @9 59 92D+ B23+ D+!6 +J + 8 D+ 2 3 D+!6 B1"! 2 233 " 8 " 8 B2 +! 24 2 3 @9 59 92D+ !+8 4 +3 9+ 3 +!C + 2 " " 28 B2 6 8 7-+5 8 2 3 .!" 18 " D+8 .2 "!8 !8 "!3+! @28 9+ 3+D+4"1C B+ " % 9 @9 59 8 B"!19"4".6 2 9+ 4 B " +59 R + 9+ "43+! B"!19"4".6 8+3 9+ 5+44 28 9+ " 8 ! 5 !+ 7 3 85"D+!+3 92 9+ 8 ! 5 !+ 2 3 7+92D "!" 9+ 5+44 8+4 @28 B"!+ 32B+ 24 9 8 4+3 " 9+ 3+D+4"1B+ " B 5!"85"1+8 2 3 " B+ 9"38 @9 59 @" 43 !+D+24 9+ B2 + 8 ! 5 !+" 4 D .5+448 2 3 8 5+ 9+ 8+" 8 59 +59 5 3+B2 38 81+5 24 !2 .9+!+ 92D+ 7++ 3+D+4"1+3 B"!19"4". 8 8 @9" 2!+ 5244+3 +6 "4". 8 8 2 +!9+!+ 3+D+4"1+3 5 "5" +5C " @ 9 9+ D285 42!.!" 18 8 59 2 5"BC 12!2 D+ 8 36 " 9+ %) 92 9+8+ 88 +8 7+52B+ 28 1!"B + ! 89 +D"4 " 2!6 32 2 28 923 7++ 9+!+1!"3 5 D+ 8 ! 5 !+8 8 2 5" 8+R + 5+ 9+!+ 92D+ 3+D+4"1+3 B"!19"4". 8 8 @9" 2!+ A "@ 28 D285 42!2 2 "B 8 8 9+ 3+D+4"1B+ " D285 42!2 2 "B6 B23+ 1"88 74+ "! +!E 1!+ 9+ 8 ! 5 !+8 2 3 !+42 " 89 18 " "88 4 142 8 2 @26 92 923 7++ B1"88 74+ 7+ "!+ 2 3 9 8 25 24 9 8 "!6 @28 B23+ "5" ! 7 8 +8 B" 6 "9+ +D"4 " 9+ 142 A .3"B 2 3 8 59 B"!19"4". 8 8 2!+ A "@ 28 124+"7" 2 8 8 9+!+ 2!+ 9 8 " !1! 5 124 3 D 8 " 8 " B"!19"4".6 "E326 3 D 8 " 8 92 3 8 . 89 8 ! 5 "!8 2 3 " + 8 " 8 2B+46 B"!19"4".6 3+24 .@ 9 !+1!"3 5 D+ 8 ! 5 !+8 M" + 81"A+ " 8 B146 28 B"!C 19"4".6G P3F"4".6 D285 42!2 2 "B6 2 3 124+"7" 2 6

2!46 9+ B"3+! 1+! "3 " 7" 2 6 9+

8 7-+5 " 142 1968 "4".6 7+.2 "288 B+ 1!"B + 5+ 8 ! 5 " 2 3 D+8 .2 " 8 1 !1"8+ 7+ . 9+ 8 36 " 9+ 25 D +8 " 142 8 9 8 1928+ " 7" 2 6 928 3+D+4C "1+3 @ 9 8 59 !21 3 6 2 3 8 288 B .8 59 B1"! 2 5+ 92 B26 7+ !+.2!3+3 28 9+ 3"B 2 1928+ 2 1!+8+ 928 3+D+4"1+3 8+D+!24 3 !+5 " 8 @9 59 3 +!+ 2 + C 8 ! 5 "!8 2 3 8 " 8 7 8 54"8+8 5" C +5 " 8 2!+ @ 9 59+B 8 !6 2 3 1968 58 25 142 1968 "4". 8 8 92D+ - 8 "@ B"!+ 5"B B " @ 9 "!.2 5 59+B 8 8 92 @ 9 142 B"!19"4". 8 8 4 9" .9 1968 "4".6 54 3+8 24 25 D +8 " 142 8 2 2 !24 54+2D2.+ " 9+ 8 7-+5 928 3+D+4"1+3 44 9"8+ 25 D +8 @9 59 B26 7+ 5" B1! 8+3 3+! 9+ 9+23 " 4 + 1!"5+88+8 " 142 8 5" 8 + 9+ 8 7-+5 " 1968 "4".6 1!"1+! @9 4+ 9+!+81" 8+8 " 142 8 " 9+ ! + D !" B+ 92D+ 7++ B23+ 9+ 728 8 " +5"4".6

8 B1"88 74+ "8+12!2 +5"4".6 !"B 1968 "4".6 1!"1+! +J5+1 76 2!7 !2!6 5" C D+ " "! 9+ @" 8 7-+5 8 "D+!421 2 B2 6 1" 8 59 +5"4". 52 "1 58 28 9+ 142 288"5 2 " 8 MA "@ 28 8"5 + +8 "!" "!B2 " 8G "!" 9+ ! 8 55+88 " "!" .+".!219 5 3 8 ! 7 " 2!+ 9+ B"8 3 8 5 3+24 .@ 9 142 8 9+ B288 2 3 3+B2 3 .+43 @"!A !2 9+!92 427"!2 "!6 @"!A 9+ "!3 2!6 8+ 8+ 7 9+ !+81" 8+8 " 3 D 3 24 142 8 " 8 59 + D !" B+ 24 25 "!8 28 4 .9 9+2 2 3 B" 8C !+ 2!+ 2 12! " " 9+ "!3 2!6 4 +!1!"5+88+8 5"4".6 892!+8 @ 9 1968 "4".6 1!"1+!+ 9+ 1!+8+ 3"B 2 +!+8 142 25 D +8 28 5" !28 +3 @ 9 142 8 ! 5 !+8 2 3 8"B+ " 8 281+5 8 928 "D+!4211+3 9+ 85 + 5+ " .+".!2196 +" 9+ 5" 81 5 " 8 1!25 524 +J12 8 " 8 " +5"4".6 928 7++ "!+8 !6 #:" "& "!+8 !6 923 4" .+J 8 +3 28 2 8+ B+ 2 3 28 2 +B1 ! 524 1!25 5+ 7 928 7+5"B+ 2 85 + 5+ 76 7+ .1 1" 2 +5"4". 524 728 8 " 9+! " 274+ 3+D+4"1B+ " 9+ 1968 "C 4". 524 M 54 3 .+5"4". 524G 281+5 " 142 8 8 9+ BB+ 8+46 1!25 524 8 7-+5 " 2.!" "B6 9+ 2B+- 1+!9218 8 " 2 92116 " + 7 8 2 38 "! 9+ 85 + 5 728 8 " 2.!5 4 !+ D"4D .59 + 46 2 8 36 " 9+ !+42 " " 8" 48 2 3 8" 4 !+2 B+ " D2! " 8 142 8 9 8 8 7-+5 8 7+ .D+8 .2 +3 " 2 42!.+ 8524+ 76 9+ ."D+! B+ 7 8 248" 2 1!"B C + +43 " D+8 .2 " 9+ D+!8 6 427"!2 "! +8 " 142 1968 "4".6 9+ "D+!4211 ." " 9+ D2! " 8 +438 " 7" 2 524 25 D 6 8 3 + " 9+ 5!+28 .+ 3C + 56 " 2 25A 9+ B"8 32B+ 24 1!"7C 4+B8 9 8 8 44 8 !2 +3 " " 46 76 9+ "D+!C 4211 ." " 9+ B"!19"4". 524 "1 58 2 3 " 9+ 1968 "4". 524 "1 58 7 248" 76 9+ +5+882!6 5"B7 2 " " B" 19"4".6 2 3 1968 "4".6 2 25A .5+! 2 1!"74+B8 9 8 928 !+8 4 +3 2 ! 9+!3 +!+ 2 " " D+8 .2 "!8 2 3 8 " 8

+ " 9+8+ 3 +!+ 2 +3 5"B7 2 " 8 7C -+5 8 8 +J1+! B+ 24 B"!19"4".6 @9 59 8 2 +J1+! B+ 24 8 36 " 9+ 25 "!8 92 3+ +!C B +! 9+ "!B 2 3 8 ! 5 !+ " 142 8 "!" 9+ !D2! " 8 "!.2 8 9+ 3+2 92 "!B 2 3 8 ! 5 !+ 2!+ 1!+3+ +!B +3 + !+46 76 @92 8 5244+3 9+!+3 6 928 5+28+3 " 7+ 8+ 4 8A "@ 92 B 59 83+ +!B +3 76 5" 3 " 8 " .!"@ 9 2 3 92 B 59 92 8 5244+3 9+!+3 6 8 9+ 1288 . " " " 8 B 42! 5" 3 " 8 !2 9+! 92 " 8 B 42! 8 ! 5 !+8

" 9+! 5"B7 2 " " " B"!19"4".6 2 3 1968 "4".6 928 3+D+4"1+3 9+ +J5++3 .46 BC 1"! 2 8 7-+5 " 142 7!++3 . 9 8 928 1!"D+3 "7+ " " 46 " 32B+ 24 85 + 5 D24 + 5" +5 " @ 9 9+ 1!"74+B8 " +D"4 C " 2 3 9+!+3 6 7 248" " BB+ 8+ 1!25 524 B1"! 2 5+ 2.!5 4 !+ 9"! 5 4 !+ + 5 2 !2446 9+ D+!8 +8 2!+ +!+8 +3 59 + 46 9+ 85 + 5 281+5 8 " 142 7!++3 . 28 89"@ 76 9+ B 4 14 52 " " " 8 ! 5 "!8 2 3 5" !8+8 7 9+6 425A 82346 9+ +5+882!6 +R 1B+ " " 7" 2 5 .2!3+ 8 9+ " 9+! 92 3 9+ 2.!5 4 !24 5"44+.+8 2!+ - 8 28 2 !2446 1!+88 . 9+ 1!25 524 281+5 8 " 142 7!++3 . 2 3 9+ ! +R 1B+ 24@268 54 3+8 2B14+ 8125+ "!8 59 +J1+! B+ 24 @"!A 89" 43 7+ !+B+B7+!+3 9"@+D+! 92 9 8 8 7-+5 28 244 " 9+!8 +44 .+ 23D2 5+ 1!25 5+ 8 " 46 B23+ 1"88 74+ 76 23D2 5+ 85 + 5 A "@4+3.+

9 !3 5"B7 2 " " B"!19"4".6 2 3 1968 "4".6 8 142 12 9"4".6 8 "! . 24 3+D+4"1B+ 9+ 8 36 " 142 3 8+28+8 @28 B2 46 2 B"!19"4". 524 8 36 2 +B1 .!8 " 3 85"D+! 9+ 12!28 5 142 52 8 .9+ 3 8+28+ 2 3 9+ " !25+ 8 4 +9 8 "!6 9 8 A "@4+3.+ @28 "44"@+3 76 8 ..+8 " 8 28 "! +2 B+ B"8 " @9 59 @+!+ +B1 ! 524 8 !+5". I+3 "@ 92 9+8+ 3 8+28+8 D"4D+ " " 46 9+ 1!+8+ 5+ " 2 12!28 +7 248" 2 3+!2 .+B+ " 9+ 5 " 8 " 9+ 142 7"36 " 9+! @"!38 9+6 2!+ 1968 "4". 524 5" 3C " 8 3 5+3 76 9+ 1!+8+ 5+ " 2 12!28 + 9 8 +@ 281+5 " 142 12 9"4".6 928 211+24+3 8 !" .46 " D+!8 6 +!+8 " "! !+1!+8+ 8 2 9"!" .946 85 + 5 2 25A 1" 1!"74+B8 " BB+ 8+ 1!25 524 B1"! 2 5+

+42 +3 " 142 12 9"4".6 2 3 5+! 2 281+5 8 2 12! " " 8 9+ @ 3+E!2 . .8 7-+5 " 725 +! "4".6 9+ 725 +! 2 2!+ 142 8 " 8 59 1+5 4 2! 1"@+!8 2!+ 8" 54"8+46 5" +5 +3 @ 9 9 B2 +!+8 8 2 3 3+B2 3 8 59 2 81+5 24 +59 5 "! 9+ ! D+8 .2 " 92 725 +! "4". 8 8 !+1!+8+ 2 8 2446 3 8 5 .! 1 " 7" 2 8 8 25 9+ 8 7-+5 " 725 +! "4".6 8 8" 7!"23 92 928 7++ 8 7C 3 D 3+3 " 8+D+!24 81+5 24 "1 58 "! +J2B14+ 725 +! 2 3 5 .9 B2)8+28+8 725 +! 2 3 5 .2 B24 3 8+28+8 725 +! 2 3 5 . 42 3 8+28+8 725 +! 2 3 5 .+!B+ 2 " 25 +! 2 J .!".+ 725 +! 2 .+ +!24 @ 9" !+ +!+ 5+ " 9+ ! +5" "B 5 !+42 " 8 + 5 9 8 928 !+8 4 +3 +5+882! 46 B"!+ "! 4+88 "D+!4211 .@ 9 " 9+! 8 7-+5 8 28 "! +J2B14+ 9+ 528 " 12 9"4". 524 725C +! "4".6 8 !+42 " " 9 B2 3 8+28+8 @9 59 8 9" .9 " 59 + 46 28 2 B+3 524 8 7-+5

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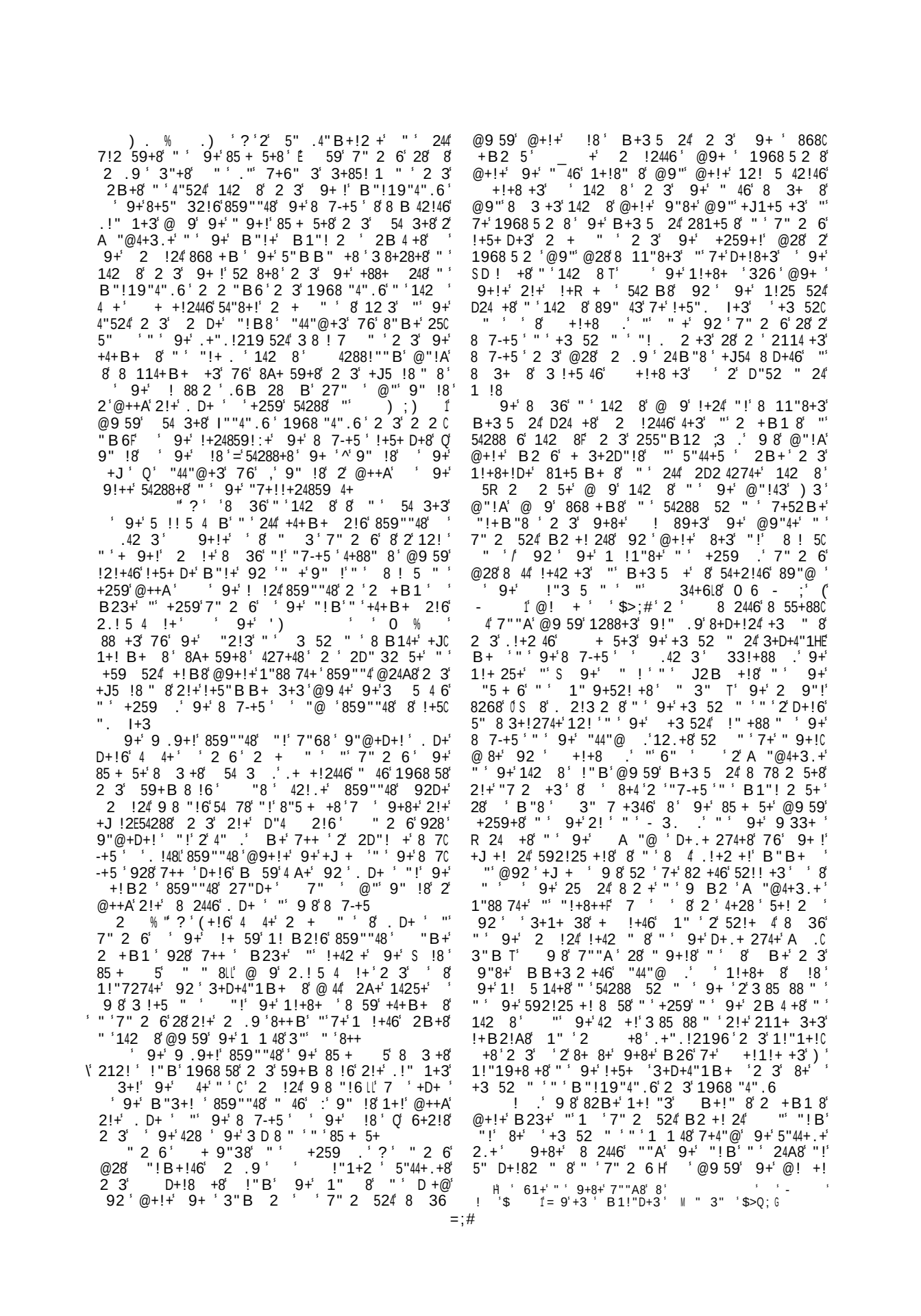

2 +B1 +3 9+ "!B " 5" D+!82 " "!3 2C 4". + "1!+8+ 9+8 ! 5 !+8" 5"BB" 142 8 8+3 54288 52 " 9+ B"8 8 55+88 4 2 +B1 "1!+8+ "!6" .8 3+ 8 9+1!+C D2 4 . " " 8 " 7" 2 6 " 9 8 1+! "3 @28 B23+ 76 ! 82 !26 #:" "& @9"7+.2 $>=Q 9+ 1 74 52 " " " 2 !+B2!A274+ 8+! +8 " +J 7""A8 @9 59 9+ +3 2 +8 @+!+ 9+ B+2 8 " . D .7" 2 6 2 1425+ 9+8+C " 32!6 859""4 ! 9+!B"!+ 9+8+ 7""A8 1!+C 8+ +3 "7+. +!8 " " 46 9+ 868 +B2 5 1" " "D +@" 7" 2 6 7 28 1968 "4".6 2 3 B"!19"4".6 7+.2 " "3+D+4"1 9+ 8+! +8 @28 8"!+D 8+3 2 3 2 .B+ +3 28 54 3+ 9+8+ 281+5 8 ! .9+ +2!4 +! 4 + 5+" ! !26 9 8 5" !6 9+!+ 211+2!+3 +!B2 6 594+ 3+ L8 $ % (' % (%- 1 "! - ' '9)% '% % 1 @9 59 @28 42 +! !2 842 +3 ".4 89 9 8 7""A @9 59 @28 + 3+3 "!8 3+ 8 " 5"44+.+ 2.+ 44 8 !2 +8 76 8 59 + 3 D 8 " 8 9+ .!"@ 9 " 7" 2 524 A "@4+3.+ 2 3 9+ 2 55"B12 6 .592 .+ 1" " "D +@" 7" 2 524 8 ! 5 " 9+!+ 2!+ !+2 +3 9+ 9+B 8 !6" 42 8 M;#12.+8G 9+ 42 +44 M<Q 12.+8G "!19"4".6 M;;# 12.+8G !.2 "4".6 M59 + 46 1968 "4".6 $$& 12.+8G 9+592!25 +! 8 58" 9+.!+2 .! 18 2!+1!+8+ +3 3+!9+8+5 " "B"!19"4".6 2 3 1968 "4".6 "5"B14+ +46@28 868 +B2 5 @"!A "B +3 8"B+ 1425+8 92 " !+C R + 46 1 1 48 8+5" 32!6 859""48 2 3 8 C 3+ 8 5"44+.+8 3 3 3+ 2 4+3 427"!2 "!6 @"!A 1" 142 12! 8 5" 5+! .@9"8+.!"88 " C 3""!211+2!2 5+ 9+6 @+!+ +!+46 ."!2 9+ 52B+ +5"4".6 28 9+ 281+5 " "142 8 36 92 5"B7 +3 " 3""!8 36 2 3 25R 2 2 5+ @ 9 142 8 @ 9 2 D+8 .2 " " 9+ 36C 2B 5 25 "!8 92 92D+ "3" @ 9 9+4 + " 142 8 D2! 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"3 92 @! +!8 " +J 7""A8 7+.2 " 3 +!+ 2 + 9 .9 859""4 +J 7""A8 !"B 9"8+ "! 5"44+.+8 @28 " 5"BB" "3 3 2 7""A @! + S "! .9 59""48 2 3 "44+.+8 T 2 3 +D+ "E326 9+!+ 2!+ "5528 " 2446 8++ D+8 . 24 !+B2 8 " 9 8 "43 3+2 @9 59 !+8 +3 1" 2 2 4 !+ "3 +!+ 2 + 9+ @" +438 " 8 ! 5 " 9+ 1!+8+ B + B "8 +259+!8 /" 7" 2 6 9+ 8+5" 32!6 859""48 7+4 +D+ 92 9+ 5" !8+ 89" 43 7+ 86 9+ 5 54 3 .2 !"3 5 " "5 24 9+ B1"! 2 281+5 8" 142 8 36 @ 9" !+2 .142 8 3+! 2 6" 9+ 2 9+! 2!7 !2!6 3 D 8 " 8 ? B"!19"4".6 1968 "4".6 2.! 5 4 !+ + 5 ? 92 2!+ !+5". I+3 B"!+ 23D2 5+3 8 36" 9+ 8 7-+5 9 8 1" "D +@ 928 "@ 7++ 23"1 +3 76 9+ @" 4+23 .! "!.2 I2 " 8 9+ +3 2 +8 92 92D+ 5" 8 3+!+3 9+ R +8 " 9+ " 2 524 "5 + 6 " B+! 52 9!" .9 8 5"BB ++ " +3 52 " 5" 8 8 C .! " 9!++ 5"44+.+ +259+!8 " 7" 2 6F 2 3 9+ "! 9 + !24 88"5 2 " " " "44+.+8 2 3 +5" 32!6 59""48 9!" .9 8 5"BB ++ " 9+ 7" 2 6 5" 8 8 .! " @+ 6E @" 5"44+.+ 2 3 8+5" 32!6 +259+!8 " 7" 2 6 92D+ 23"1 +3 2 86 9+ 5 5" !8+ 9+ 8 7-+5 "!9+ 8+5" 32!6 859""48 8 248" 7+4 +D+3 76 9+8+ 5"BB ++8 92 9+ 85 + 5+ " 7" 2 6 928 .!"@ " 8 59 1!"1"! " 8 92 8 "@ 8+ 8+5" 32!6 +3 52 " " 2 +B1 " A++1 27!+28 " 7"C 2 524 !+8+2!59 9+!+ 8 "@ 2 2 !46 @+44E 3+ +3 7"36" 7" 2 524 A "@4+3.+ 92 89 43 7+ "!.2 I+3 "!8+ +4+B+ 2!6 2 3 8+5" 3C 2!6 +3 52 " 24B"8 !+.2!34+88 " @92 B26 9211+ 9+!+8+2!59 3+D+4"1B+ " 7" 2 6 8 288 B+3 " 5" !8+ 92 +4+B+ 2!6 8+5" 3C 2!6 2 3 5"44+.+ 8 ! 5 " 9+ 8 7-+5 @ 44 2D2 4 8+4 " +D+!6 "11"! 6 " 5"!!+5 8 7"36 " A "@4+3.+ 9+ 4 .9 " " 9+ B"8 !+5+ 7" 2 524 !+8+2!59 (= ;" ? 1!+8+ E326 1!25 5+8 +259 .7" 2 6 9+ 8+5" 32!6 859""48 427"!2 "!6@"!A 8 .+ +!24 9" .9 " D+!824 9+ R 2 6 A 3 2 3 1 !1"8+ " 9+ 427"!2C "!6@"!A D2! +8 8" .!+2 46 28 " "!5+ 1" " ! 2 + " 2.2 9+ .!+2 ++3 " 2 52!+ 4 85 + 5 8 36" " 9+ +259 ." " 9+ 8 7-+5 8"B+ 859""48 427"!2 "!6@"!A 8 +!B + 7+ .8+3 @9+ 2D"!274+ B2 +! 24 8 + 5" C +!+3 2 3 9+ "!" 46 12! "!" 244 " 2 8 .4+ !+5 2 " 1+! "3 " 9+! 859""48 +"!" @" !+5 2 " 1+! "38 1+! @++A 2!+ !+. 42!46 .D+ " 427"!2 "!6 @"!A 9 4+ 9+ 7+8 !6 725 +! "4".6 142 3 8+28+8 142 7!++3 .+ 5 9+!+ 92D+ 7++ 2 +B1 8 "255+1 " +"!B"!+ " 9+8+ 1" 8 " D +@ 28 9+ " + "3+ +!B + 9+ +3 52 " 24 8+ " 7" 2 524 B2 +! 24 8 2 !24 1+!9218 92 28 9+ 85 + 5+ 928 3+D+4C "1+3 +259 +@46 !+5". I+3 281+5 76 D ! + " 8 !+89 2 !25 D+ +88 2 3 8. 52 5+ 89" 43 8++B B"8 8+ 4 +3 52 " +J 7""A8 "! 8+5" 32!6 859""48 2 3 5"44+.+8 92D+ 7++ 1!+12!+3 @ 9 +259 " 9+ 281+5 8 " 7" 2 6 28 9+ 3+ +!B .+2 !+ 8 2 27" 9 8 1+! "3 92 @! +!8 " +J 7""A8 7+.2 " 3 +!+ 2 + 9 .9 859""4 +J 7""A8 !"B 9"8+ "! 5"44+.+8 @28 " 5"BB" "3 3 2 7""A @! + S "! .9 59""48 2 3 "44+.+8 T 2 3 +D+ "E326 9+!+ 2!+ "5528 " 2446 8++ D+8 . 24 !+B2 8 " 9 8 "43 3+2 @9 59 !+8 +3 1" 2 2 4 !+ "3 +!+ 2 + 9+ @" +438 " 8 ! 5 " 9+ 1!+8+ B + B "8 +259+!8 /" 7" 2 6 9+ 8+5" 32!6 859""48 7+4 +D+ 92 9+ 5" !8+ 89" 43 7+ 86 9+ 5 54 3 .2 !"3 5 " "5 24 9+ B1"! 2 281+5 8" 142 8 36 @ 9" !+2 .142 8 3+! 2 6" 9+ 2 9+! 2!7 !2!6 3 D 8 " 8 ? B"!19"4".6 1968 "4".6 2.! 5 4 !+ + 5 ? 92 2!+ !+5". I+3 B"!+ 23D2 5+3 8 36" 9+ 8 7-+5 9 8 1" "D +@ 928 "@ 7++ 23"1 +3 76 9+ @" 4+23 .! "!.2 I2 " 8 9+ +3 2 +8 92 92D+ 5" 8 3+!+3 9+ R +8 " 9+ " 2 524 "5 + 6 " B+! 52 9!" .9 8 5"BB ++ " +3 52 " 5" 8 8 C .! " 9!++ 5"44+.+ +259+!8 " 7" 2 6F 2 3 9+ "! 9 + !24 88"5 2 " " " "44+.+8 2 3 +5" 32!6 59""48 9!" .9 8 5"BB ++ " 9+ 7" 2 6 5" 8 8 .! " @+ 6E @" 5"44+.+ 2 3 8+5" 32!6 +259+!8 " 7" 2 6 92D+ 23"1 +3 2 86 9+ 5 5" !8+ 9+ 8 7-+5 "!9+ 8+5" 32!6 859""48 8 248" 7+4 +D+3 76 9+8+ 5"BB ++8 92 9+ 85 + 5+ " 7" 2 6 928 .!"@ " 8 59 1!"1"! " 8 92 8 "@ 8+ 8+5" 32!6 +3 52 " " 2 +B1 " A++1 27!+28 " 7"C 2 524 !+8+2!59 9+!+ 8 "@ 2 2 !46 @+44E 3+ +3 7"36" 7" 2 524 A "@4+3.+ 92 89 43 7+ "!.2 I+3 "!8+ +4+B+ 2!6 2 3 8+5" 3C 2!6 +3 52 " 24B"8 !+.2!34+88 " @92 B26 9211+ 9+!+8+2!59 3+D+4"1B+ " 7" 2 6 8 288 B+3 " 5" !8+ 92 +4+B+ 2!6 8+5" 3C 2!6 2 3 5"44+.+ 8 ! 5 " 9+ 8 7-+5 @ 44 2D2 4 8+4 " +D+!6 "11"! 6 " 5"!!+5 8 7"36 " A "@4+3.+ 9+ 4 .9 " " 9+ B"8 !+5+ 7" 2 524 !+8+2!59 (= ;" ? 1!+8+ E326 1!25 5+8 +259 .7" 2 6 9+ 8+5" 32!6 859""48 427"!2 "!6@"!A 8 .+ +!24 9" .9 " D+!824 9+ R 2 6 A 3 2 3 1 !1"8+ " 9+ 427"!2C "!6@"!A D2! +8 8" .!+2 46 28 " "!5+ 1" " ! 2 + " 2.2 9+ .!+2 ++3 " 2 52!+ 4 85 + 5 8 36" " 9+ +259 ." " 9+ 8 7-+5 8"B+ 859""48 427"!2 "!6@"!A 8 +!B + 7+ .8+3 @9+ 2D"!274+ B2 +! 24 8 + 5" C +!+3 2 3 9+ "!" 46 12! "!" 244 " 2 8 .4+ !+5 2 " 1+! "3 " 9+! 859""48 +"!" @" !+5 2 " 1+! "38 1+! @++A 2!+ !+. 42!46 .D+ " 427"!2 "!6 @"!A 9 4+ 9+ 7+8 !6 725 +! "4".6 142 3 8+28+8 142 7!++3 .+ 5 9+!+ 92D+ 7++ 2 +B1 8 "255+1 " +"!B"!+ " 9+8+ 1" 8 " D +@ 28 9+ " + "3+ +!B + 9+ +3 52 " 24 8+ " 7" 2 524 B2 +! 24 8 2 !24 1+!9218 92 28 9+ 85 + 5+ 928 3+D+4C "1+3 +259 +@46 !+5". I+3 281+5 76 D ! + " 8 !+89 2 !25 D+ +88 2 3 8. 52 5+ 89" 43 8++B B"8 8+ 4 +3 52 " +J 7""A8 "! 8+5" 32!6 859""48 2 3 5"44+.+8 92D+ 7++ 1!+12!+3 @ 9 +259 " 9+ 281+5 8 " 7" 2 6 28 9+ 3+ +!B .+2 !+ 8 2 27" 9 8 1+! "3 92 @! +!8 " +J 7""A8 7+.2 " 3 +!+ 2 + 9 .9 859""4 +J 7""A8 !"B 9"8+ "! 5"44+.+8 @28 " 5"BB" "3 3 2 7""A @! + S "! .9 59""48 2 3 "44+.+8 T

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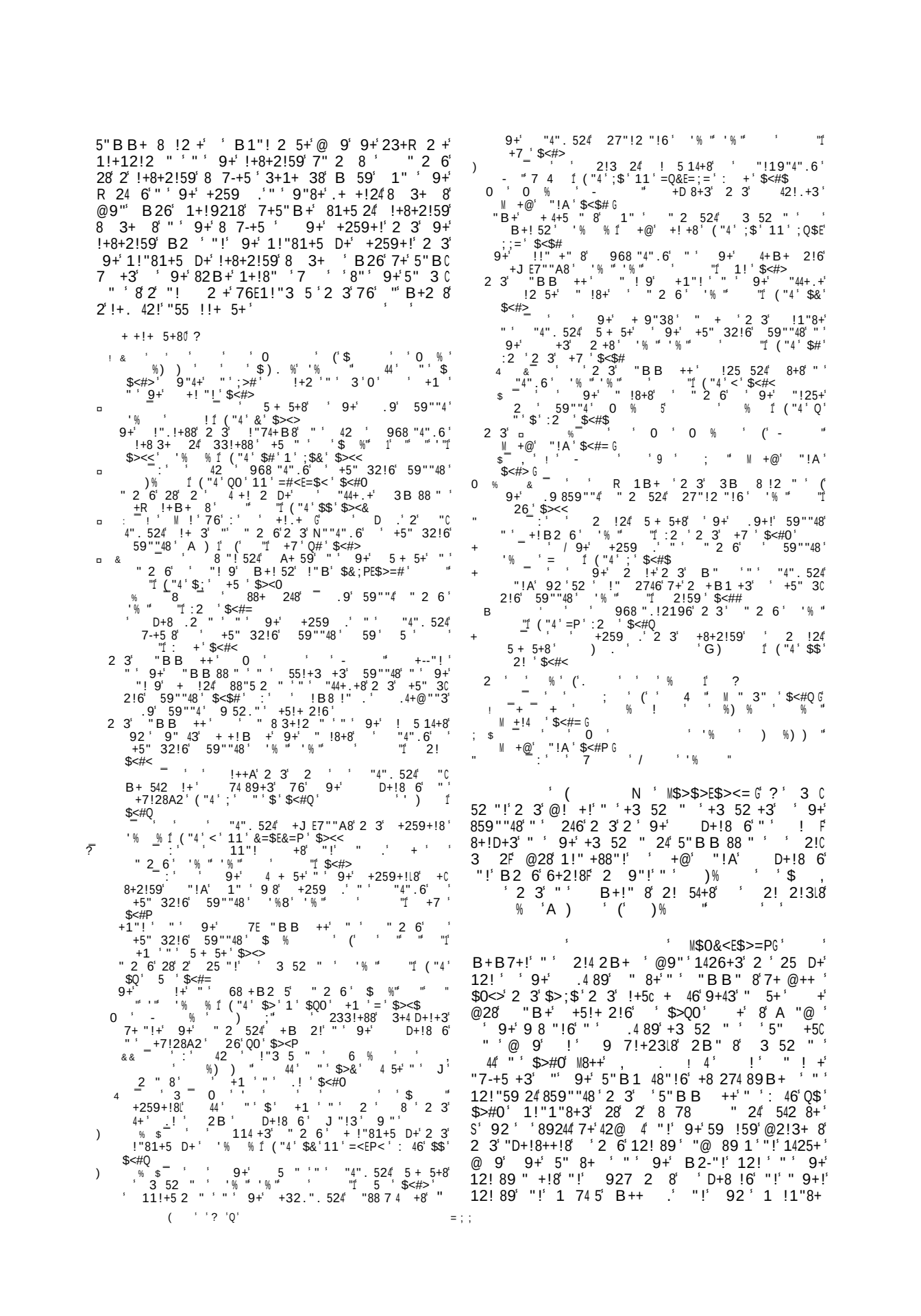
V@8 9 8 ! 5 " @"446 3 325 5 2 " +J1+! B+ 24 B 2 6 859""48 9 1 1 48 2!+ . D+ 3+1+ 3+ 427"!2 "!6 @"!A 2 2!+ !+R !+3 "B2A+ 3+ 8 2 +B+ 8 3!2@ .8 2 " +8 5" 5+! .9+ !+ 5+8 @9 59 +!+ 5+8 2!+ 7+ B23+ + !+46 !"B 9 8 8 36 " B2 +! 248 "/8D .9 8 A 3 "427"!2 "!6@"!A +J 288 . B+ 8 !+5 2 " 8 2 3 233 " 24 3 85 88 " 8 !"B 9+ +259+! 92D+ 2 728 8 "! +!1!+ 2 " 2 3 "!.2 !2 " 76 9+ 8 3+ 7+52 8+ " 9 Z 5" 25 @ 9 142 8 9+ 427"!2 "!6 +43 @"!A 2 3 9+ .!++ 9" 8+ 2!+ B1"! 2 25 "!8 9+ + 5 + 56 " 9+ 427"!2 "!6 8 3+ " 9+ 8 36 " @9 59 9+6 2!+ 2 12! 9+6 2!+ 5!+28 . @ 9 5"B B+ 3274+ !21 3 6 9+ 61+8 " +J 7""A8 B"8 .+ +!24 8+ 2!+ 9"8+ 76 " 4 +! 2 3 76 +!.+ 9+ "!B+! 8 288 B+3 92 427"!2 "!6 @"!A 8 "7+ 2 12! " 9+ 5" !8+ 2 3 9+ +J 7""A B2 +! 248 2!+ 1!+8+ +3 8 28 "5" 8 +2 +427"!2 " " "!B2 " 92 9+ 1 1 4 8 +J1+5 +3 "8+5 !+ !"B 2 !8 E92 3 8 36 " 142 8 9+8+ 7""A8 3" " 54 3+ 427"!2 "!6 3 !+5 " 8 @9 59 2!+ . D+ 212! 2 8+12!2 + 7""A4+ "!3+! 92 9+!+ B26 7+ 3+1+ 3+ 5+ 9+ 8 36 " B2 +! 248 9+ 7""A8 76 +!C .+ 248" 2!+ 3+8 . +3 "!8+ V@ 9 427"!2 "!6 @"!A 7 2!+ "8" 2!!2 .+3 28 " 3+B2 3 28 B 59 427"!2 "!6 @"!A 28 9+" 9+!61+ 9+ 42 +8 7""A 76 +259" 9+8+ 2 9"!8 !+1!+8+ 8 2 86 9+ 5 5" !8+ 9+ 8 7-+5 9+!+ 2!+ B+!" 8 427"!2 "!6 B2 248 !2 . 142 !"B 9"8+ 92 54 3+ 2 !+42 D+46 +@ "1 58 2 3 1!+8+ 9+B 8 59 2 @26 28 " 4+2D+ 9+ 1 1 4 " 9 8 ")@ !+8" !5+8 +!1!+ 2 " " 9"8+ 92 1!+8+ 2 B1"88 74+ 2!!26 " "1 58 2 3 76 9"!" .946 3+ 2 4+3 R +8 " 8 2 +B1 " "!B 9+ 8 3+ 27" 244 92 7" 2 524 A "@4+3.+ 1"88+88+8 !+.2!3 .9+8+ "1 58 0 0 % (- "? 8 " 4 +" 9+ 7" 2 6 9+ 5"B B +" 9+ "! 9 + !24 88"5 2 " " "44+.+8 2 3 +5" 32!6 59""48 B2A+8 9+ "44"@ .8 2 +B+ !+.2!3 .9+ R 24 52 " 8 " 9+ +259+!0 S 8 7+ 4 +D+3 92 9+ +259+!" 7" 2 6 9+ 9 .9 859""4 89"J 43 92D+ 2 B B B 1!+12!2 " 7" 2 6 +R D24+ "@"6+2!8 " 5"44+.+ @"!A 9 8 @"!A 89" 43 54 3+ 9+ .+ +!24 B"!19"4".6 " 9+ 4"@+!2 3 9 .9+! .!" 18 +4+B+ 2!6 142 1968 "4".6 2 3 +5"4".6 8"B+ A "@4+3.+ " 142 3 8+28+8 2 3 25R 2 2 5+@ 9 4"524 142 8 1968 ".!2196 I""4".6 2 3 2 5" !8+ .+ +!24 725 +! "4".6 2!+ 248" 3+8 !274+ 9+ +259+!89" 43 92D+ 8"B+ A "@4+3.+ " 9+ 1 !1"8+ " 7" 2 6 9 .9 859""4 +3 52 " 2 3 " 5 !!+ 2 3 3+ 8 !274+ 1!25 5+ +259 .7" 2 6 5+ 9+ +259+!" 7" 2 6 8 2446 +259+8 " 9+!85 + 5+8 +259 3+B2 3 .8"B+@92 8 B 42 1!+12!2 " "7D " 846 " B2 2 9 8 8 2 32!3 B"!+ .+ +!24 2 3 B"!+ +J + 3+3 1!+12!2 " ++38 " 7+ !.+3 9 8 8 2 32!3 " 1!+12!2 " 8 3++B+3 9 .946 3+8 !274+ " .D+ 7" 2 6 8 1!"1+! 1425+ 8+5" 32!6 +3 52 " 7 B26 " 24@268 7+ 1!25 5274+ 8 9+ 8 2 32!3 92 89" 43 7+ B+ 76 9"8+ @9" 2!+ "@ 1!+12! +259 9+ 8 7-+5 T 8 .+ +!2446 !+5". I+3 92 9+ 3+ +!B C .25 "! 7" 2 6 28 " 9+! 85 + 5+ +259C .8 9+ +259+! 8 7-+5 8 92 2!+ B"!+ 5"B 14+ +46 "!.2 I+3 "! +3 52 " 24 1 !1"8+8 4+88 3+1+ 38 1" 9+ R 24 6 2 3 1!+12!2 " 9+ +259+! 9+ 3+ + +88 "! "!.2 I2C " B2 +! 24 8 2 !46 .+ +!24 8"B+@92 4+88 8 !+R !+3 " 9+ +259+! 9 8 3+ +C +88 8 3 !+5 46 9+41 4 8+5" 32!6 859""4 +259 .F 7 9+ 5"44+.+ 1!+12!2 " 9+ +259+! 8 9+41 4 92 8"B+ 8 7-+5 8 9+ 12! " 9+ 7"36 " A "@4+3.+ 92 928 1!"D+3 ."3 "! 8+5" 32!6 859""4 8+ B26 7+ B23+ 3 8 5 !"B 9+ 12! 8 92 2!+ "! 5"44+.+ 8+ "! "! 81+5 24 8 8 !+8+2!59 9+ 8 24 5" !8+ " 1!+12!2 " 8 59 B26 7+ 5244+3 " 2 9 .9 859""4 +259+!" 7" 2 6 52!! +8 9 B 9!" .9 2 8+! +8 " 5" !8+8 92 2!+ 142 +3 1! B2! 46 "! 8 3+ 8 @9" +D+ 2446 B26 3" !+8+2!59 7" 2 6 "88 746 8"B+ B26 2!. + 92 1!+12!2 " "! !+8+2!59 8 9+ 7+8 1!+12C !2 " "! +259 .7 9 8 8 " 6+ 1!"D+3 ! 9+!B"!+ 5"44+.+8 2 3 D+!8 +8 +B192C 8 I+ 3 +!+ 281+5 8 " 7" 2 6 8"B+ 2.! 5 4C !24 8"B+ 56 "4". 524 8"B+ B"!19"4". 524 2 3 8 5+ 6" .+259+!8 2 !2446 @ 89 +259 9+ 9 .8 92 9+6 2!+ B"8 +!+8 +3 9 8 4+238 " 7242 5+3 5" !8+8 3+ +!B +3 " 76 @92 2!+ 9+ +3 52 " 24 8"5 24 2 3 3 8 ! 24 ++38 " 9 .9 859""4 7"68 2 3 . !48 7 76 9+ 12! 5 42!4 + " 7" 2 6 @9 59 2 12! 5 42! 5"44+.+ "! D+!8 6 8 3" .8 !+8+2!59 @"!A .42 3 7" 2 6 8 " +4+5 +3 .+ +!2446 76 8+5" 32!6 859""4 8 3+ 8 7 76 9"8+ @9" +J1+5 " 2A+ 2 B+3 524 5" !8+ 8 82 3 92 9+ 8 7-+5 8 " +4+5 +3 76 B"!+ 1 1 48 7+52 8+ 8 2 .9 8" 92 8++B8 8 .C 52 " 46 " 9"8+ @9" 2!+ . 8 " 8 36 B+3 5 + 9 8 8 ..+8 8 2 D+!6 !+24 3 5 4 6 " 2 6 B 8 7+ 2 .9 8" 92 @9 4+ 92D .+3 52 " 24 D24 +8 928 211!+5 274+ 8 . C 52 5+ " 9"8+ @9" 2!+ 8 36 . 9 8 5" !6 2 3 .42 3 8 " 5"B B" "!+ D+!8 6 +259+!8 " 7" 2 6 2 3 I""4".6 " 826 92 9+8+ 8 7-+5 8 @" 43 7+ +! 7+ "B +3 !"B 8+5" 32!6 859""48 4 23+R 2 +46 1!+C 12!+3 +259+!8 2!+ 2 92 3 8 ! + 92 2 24 ".+ 9+!" "" 42!.+ B7+! "! 2 +46 2 3+C 5!+28 . B7+! " 8+5" 32!6 859""4 +259+!8 2!+ +259 .7" 2 6 @ 9" 2 6 2523+B 5 1!+1C 2!2 " F 7 7+8 3+8 9+8+ 9+ +259+!8 2!+ 9+ 5"44+.+ 2 3 D+!8 6 1!"3 5 2 3 9+ D+!C 8 +8 2 3 5"44+.+8 2!+ .+ .9+!+8 4 " 9+ !" @ 8 3+ 8 @"!A 9+ 859""48 "B 9+8+ 8 7-+5 8 1+ 3 .9+ ! 9+! 1!+12!2 " " +259+!8 9+ 8 2 " 8 4 A+46 " 7+ !+259+3 @9+!+ S 7 "4".6 8 " 2 .9 7+52 8+ 9+!+ 2!+ " +259+!8 9+!+ 2!+ " +259+!8 7+52 8+ 7 "4".6 8 " 2 .9 T 2 9+! B 8 7+ !2 A46 !+5". I+3 92 9+ 23+R 2 + 1!+12!2C " " 9+ +259+!" 7" 2 6 8 2 1 +5+ " @"!A



BOWDOIN COLLEGE.

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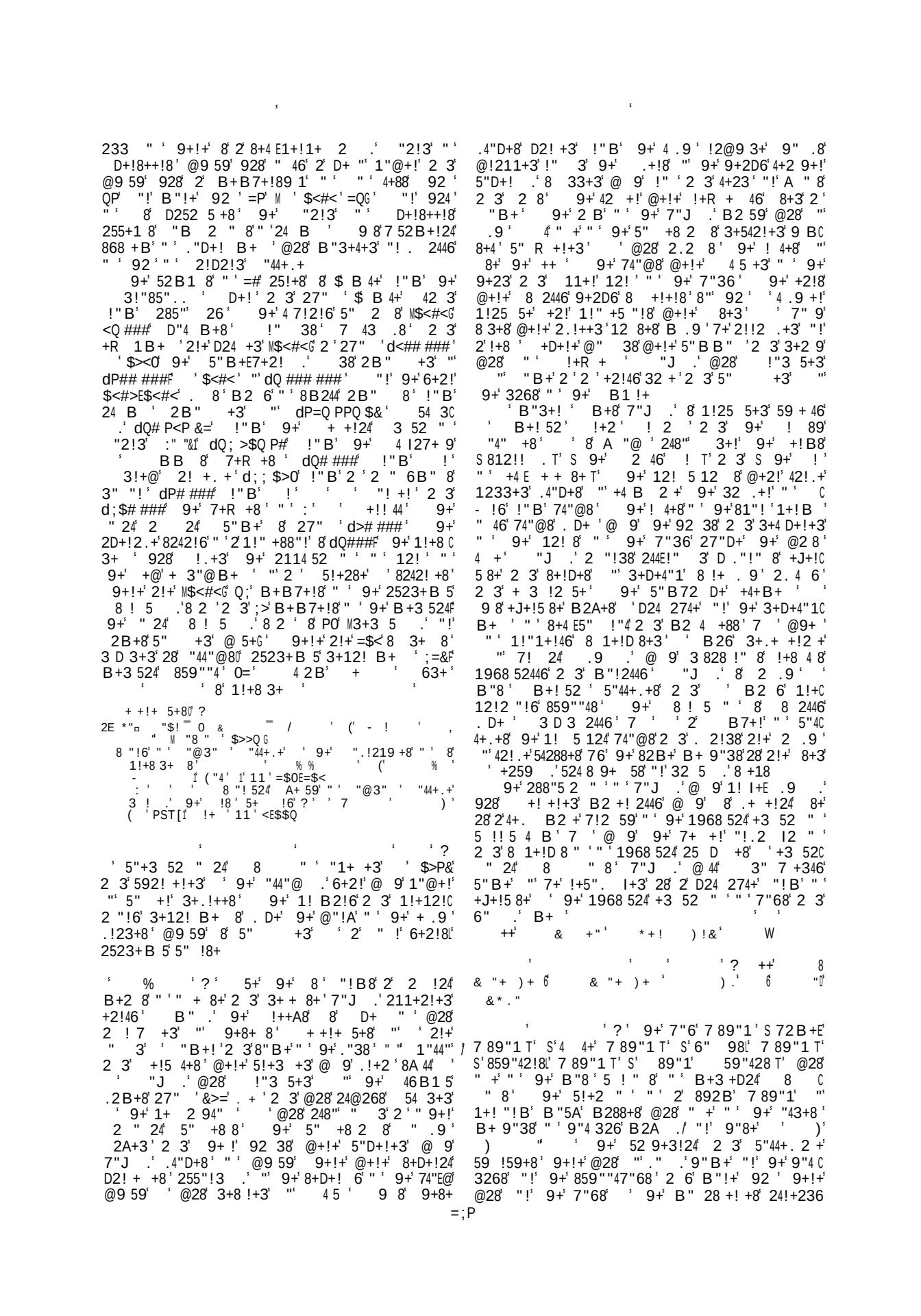

3+D" +3' . & "'7+5"B+'B" A8' '9 B2 '
2 !+' B 8' 92D+' !+4 + ' 2 3' 9+' +554+8 28 58'
!+1!"3 5+3' 3+!'2'!+4 . " 8' "!'!2 9+!'2' 9! 8C
2 '38. 8+' 9+'9"4 3268' " ' 9+' "B2 '1"1 C
42!'2 3'!+4 . " 8'@ +!' +28 8' " ' 9+'2 ! 24 2 '
+@' +2!L8' 26'M 9+' 24+ 38' " ' :2 2!6G'2 3'
9+' +28 ' " ' ""48' " ' +7' $0' 9+' "43+!'
B+B7+!8' 923' 9+ !' ###8' 28' 9+6'@+!+' 5244+3 '
7+. .' " ' +5 ' $& ' 9+' 326' " ' R' ' 1'
!"B' @9 59' 326' "' 9! 8 B28' 26' 9+' 2 C
9+B8'7+.2 '@ 9'C'# T' R' 6'A ' "!' 9+'.2!C
3+ +!'2 3' 9+'4 A+' '@9 59' ' ! '+259' " 5+!'
" '2'52 9+3!24' "!' B" 28 +!6' .2D+'2'3 +!'2 3'
@ +' "' 9 8' 5"44+2. +8' 3268' 8 ' 5"B B+B"C
!2 +3' ' 9+' !82!L8' 3 +!'2' ' " 48L' "4C
4+.+' J "!3'9+43' 44' $# 6+2!8'2."' " ' +5 ' $<'
9+8+' 3268' 5"!!+81" 3+3' @ 9' 9+' "B2 '
2 ! 24 2' @9 59' 248"' 7+.2 ' " ' +5 ' $&'
+!' 9! 8 B28' 9+!+' @+!+' " !') 1' "!'
32 5 .8'8268'2'52 " '" ' B + 8'%" $$>Q' ' 9+'
59 !59' " ' 9+' 3+25" 8' M" ' ' +19+ L8' 26'
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' :"9 L8' 26'M9+' 7+ .' 2'1! +8 G' " ' 7"68' " '
"5+ 8L' 26'2 3' " '8 73+25" 8' "5+ 8/
26'!+1!"3 5+3' 9+': D+ 24 2' @9 59'5" 54 3+3'
9+' 2 ! 24 2' 2 ' "B+' 5+ 8+' @28' " ' 9+'
+88+ 5+' " ' 9+' 2 ! 24 2' 9+' 842D+' 82 ' ' 9 8'
B28 +!L8' 1425+' 1 74 5' .2B74 .' @28' 1+!B +3 '
9+!+' @+!+' 1 74 5' +28 .' 1!"5+88 " 8' 2 3'
. D .' " ' 1!+8+ 8' ' 9+' +D+' " ' "5+ 8/
26' '4 A+' B2 +!'2' (+81+!8' @9+ ' 9+' ,
(% ' @28' 8 .' 2' 9+' D+!8+' 3' +' 92 9' 1 '
3"@ ' 9+' B .9 6' !"B' 9+ !' 8+2 8' 2 3' 92 9'
+J24 +3' 9+' 9 B74+' 2 3' B++A T' 9+') 1'
28' ' 8' 89"! 46' 5244+3' 9+' !+24' 7 89"1' D252 +3'
9 8' 9!" +' ' 2D"!' " ' 2' 7 89"1' +4+5 +3' 76' 9+'
7"68' 9+' 1!+5+ "!' 2 3+3' "D+!' 9 8' 8 2 ' " '
" 5+' @ 9' @9 59' 9+' ! 4+3' 9+' 59" ! ' "' 2' 7"6'
1!+5+ "!' 2 3' 9+' " 9+!' 3 . 2! +8' 2 3' 52 " 8'
8 59' 28' 9+' 859""4B28 +!' "!' 592 5+44"!' .2D+'
1425+' "' 7"68' 92 ' ""A' 9+ !' 4+8' 2 3'
3 +8' 9+' 7"6' 7 89"1' "!' 9+' @9"4+' " '
"5+ 8L' 26'1+! "!B+3' 9+' 8+!D 5+8' 54 3C
.' 9+' B288' 8+4 ' 5423' ' 44' 1" 5248'
1!+259+3' 2' 8+!B" ' 2 3' .2D+' 9+' 8"4+B '
+1 85"124' 74+88 .' "' 9+' 1+"14+' +' 7 89"1'
2 ' 4+28 ' .2D+' 9 8' "@ ' B +!' 76' @ 44 ' "!'
9+' 8+' " ' 9+' 7"6' 7 89"1 ' @9 4+' ."!.+" 8'
521+8' 2 3' 2478' @+!+' 1!"D 3+3' "!' 9 8' 5"BC
12 " Z' 9+6'@+ ' !" 3' 9+' "@ ' ' 1!"C
5+88 " ' 9+' 7"6' 7 89"1' ! 3 .' 2 3' + 3+3'@ 9'
2' .!+2 ' 8 11+!' +' !8 ' 9+2!' ' .42 3' " '
9+') ' ' 2' 4+ +!' " ' 439+4B' "' "+33 '
89"1' " ' 59+8 +!' 27" ' <<<' +J5 8 .' 9 BC
8+4 ' !"B' 5"B .' "' ' 9! 8 2 ') '@ 9'
9 8' "43' 5"B12 " 8' 7+52 8+' " ' 9 8' B B+!8 " '
' 9 8' 8 3 +8' ' <$$' @9+ ' " !23' ' " ' +!C
B2 6'@28' 8 26 .'@ 9' 9+' 89"1' " ' " 8 2 5+'
9+'D 8 +3' 9+' B" 28 +!6' " ' ' 244' " ' 1 !1"8+'
"' 8+!+' 9+' 9! 8 2 ') 1' +81+5 2446' 9+'
!"5+88 " ' " ' 9+' 2 8' @9 59' @28' 9+ ' 8"'
8"4+B ' 92 ' 9+' 7"68L' !2 A8' @+!+' " ' 7!"A+ '
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9+'59 !59'54"8+'76' 9+B ' 9 8' 3+5"! B'@28'76'
"' B+2 8' .+ +!24' '42 +!' B+8 ' ' ' 2 4L8
" 3" ' 5 ' $$<#' 2' 8 2 +' 1!+85! 7+3' 92 ' 2'
+@'!+8 3+ 2!6'52 " ' @28' "' +85"! ' 9+' 7"6'
@9"' !+1!+8+ +3' 9 B' " ' "5+ 8L' 26' 725A'
"' 9+' 4B" !6' @ 9' 32 5+8' 2 3' 8" .8' 2 3'
"!59+8' 2 3' "' . D+' 9+' 7"6' 7 89"1' 8 11+!' " '
9+' "5 2D+' " ' 9+' 326' 2 3' ' 9+' @2 +3' "!' 9 B'
44' 42 +' 2 ' .9 ' @28' +J5 8+3' 2 8' ' 9+'
B"! .'
' 9+' +4+D+ 9' 5+ !6' 9+' 7"6' 7 89"1L8'
+28 ' @28' 5"B 7 +3' @ 9' 92 ' " ' ' 59"428'
" ' 6!2'42 +46' !2 842 +3' "' 2!' ' 246 ' +'
@28' B23+' 9+' 12 !" ' 82 ' " ' 859"42!8' 2 3'
859""47"68' 7+52 8+' " ' 9+' 24+' " ' 9 8' !2 8 .' "'
4 +'2.2 ' 9!++' 7"68' " ' 9+ !'@26' "' 859""4' 2 '
9+ 8'@9"' 923' 7++ ' B !3+!+3'2 3'1 5A4+3' 76'
2' .!++36' A++1+!' ' B 2 6' 1425+8' 9+' +4+5C
" ' " ' 7"6' 7 89"1' ""A' 1425+' " ' ' 59"428L'
26' +5 ' & ' ' "!A' ' $;<&' 9+' 7"6'
7 89"1' @28' +4+5 +3' " ' 92 ' 326'2 3' 9 8' +1 85"C
1256' 428 +3' "' 2 34+B28' 26' M +7' QG'
3 ! .' @9 59' B+' 9+' !"3+' 27" ' 9+' 5" !6'
@ 9' D+'2 + 32 8' 54 3 .' 2' + "!' 2 3' 2'
B 334+' D" 5+' 8 .+!' 2 3' 1+! "!B+3' 14268' 7+C
"!+ '2 3' 4+D +3' 5" ! 7 " 8' " ' + .97"! .'
B2. 2 +8' +81+5 2446' 9+' 9+238' " ' !+4 . " 8'
9" 8+8' ' 255" ' !"44' "!' 9 8' 6+2!' 8' 2 '
"!A' 2 3' 89"@8' 92 ' 9+' " +88" " ' "!C
9 B7+!42 3' 5" ! 7 +3' "' 4+88' 92 '^$' 2 3'
2' ."43' ! .' 2 3' 9+' 7"6' 7 89"1' 923' 2' 8 !14 8'
" ' "D+!' ^;#' ^&##' " ' B"3+B' B" +6' 2 +!'
126 .' 244' +J1+ 8+8' (2!" 8' 4B 2 " 8'
@+!+' 2 B+3' 2' 27 8+8' " ' 9+' 5+!+B" 6' '
$Q&;' 2' ' 2 4L8' 2' 8 2 +' +81+5 2446' "!723+'
9+' !+24' 3+2 '2 3' 52 " 8' !"B' 7+ .' B23+' "'
1+! "!B' 8+!D 5+8' "!' 9+' "6' 2 3' 4 B +3' 9 8'
B B+3 2 +'2 + 32 8' "' 8 1'@ 9' 9+' +2 ' "'
$P' 2 3' 9"8+' " ' 9+' 7"6' 3+2 ' "' ;F' 2 3' '
$;$<' 2 ' 24 87 !6' 8 2 +8' @+!+' 2 B+3' 2 '1!+C
D+ .' 9+'5!"@38' 2 3' 3 8"!3+!46' 1!"5+88 " 8'
+ ' 9+' 859""4E " 3+!8' 81+5 2446' !+5". I+3' '
' $;## @+' 3' +! " ' "44+.+' 126 .' "!'
9+' % ' "!' " +! .' " ' 4+88+3' 59"428' "!'
" +' " ' 9+' " 3+!L8' A ' 7"68' ' 9+'.!2B B2!'
859""4' 2 259+3' "' 9+' 5"44+.+' ' 5+ !6'
42 +!' 44 2B' " ' 6A+92 B L8' 2 +8' "!' C
59+8 +!' "44+.+' ' $=##' @9 4+' 1!"D 3 .' 92 '
9+' 2!3+ ' 2 3' +44"@8' @+!+' "' " 5 2 +' " '
+28 ' 3268' 8268 S' +' 244"@' 9"@+D+!' 92 ' " '
9+' +28 ' " ' "5+ 8' 9+' 7"68' B26' 1+! "!B'
9+' 3 D +' " 5+8' 2 +!' 9+' 8+' " ' 2! B T' 2 3'
9+' .2D+' 2' B +!' " ' 54" 9' " ' ."43' 2 3' 2' 5!"I +!'
" ' 5"11+!. 4 ' "!' 9+' 7"6' 7 89"1F' @9"' 8' 5244+3'
9+' 59"42!8L' 89"1' ' $=#&' @9+ ' B+ ' !"B'
"14+6' 52 B+' 2 3' 32 5+3') .) &' 7+C
"!+' 9 B' 9+' " ' 2 +8' " ' $==;' ' 9+'
82B+' 5" +5 " ' 244"@+3' 9+' 7 89"1' " ' 9+' 7"6'
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59"428' 2 3' " ' " ' "5+ 8L' 26' "' 3"' 244'
8+!D 5+8' +J5+1 ' 9+' 8+5!+ ' " ' 9+' B288' 9 8'
428 'R 24 52 " ' @28' ' 5" 8+R + 5+' " ' 2' 3+23'
8+ ' B23+' 2 ' 9 8' 2 3' 9+' A 3!+3' +28 ' " '
""48' 76' 9+' " 5 4" ' 284+' ' $=;P' ' $=&=
2' B" A' " ' 2 +!7 !6' !+5"!38' 28' 2' " 274+'
+D+ ' 92 ' 9+!+' @28' "' 7"6' 7 89"1' ' 9+' .!2BC
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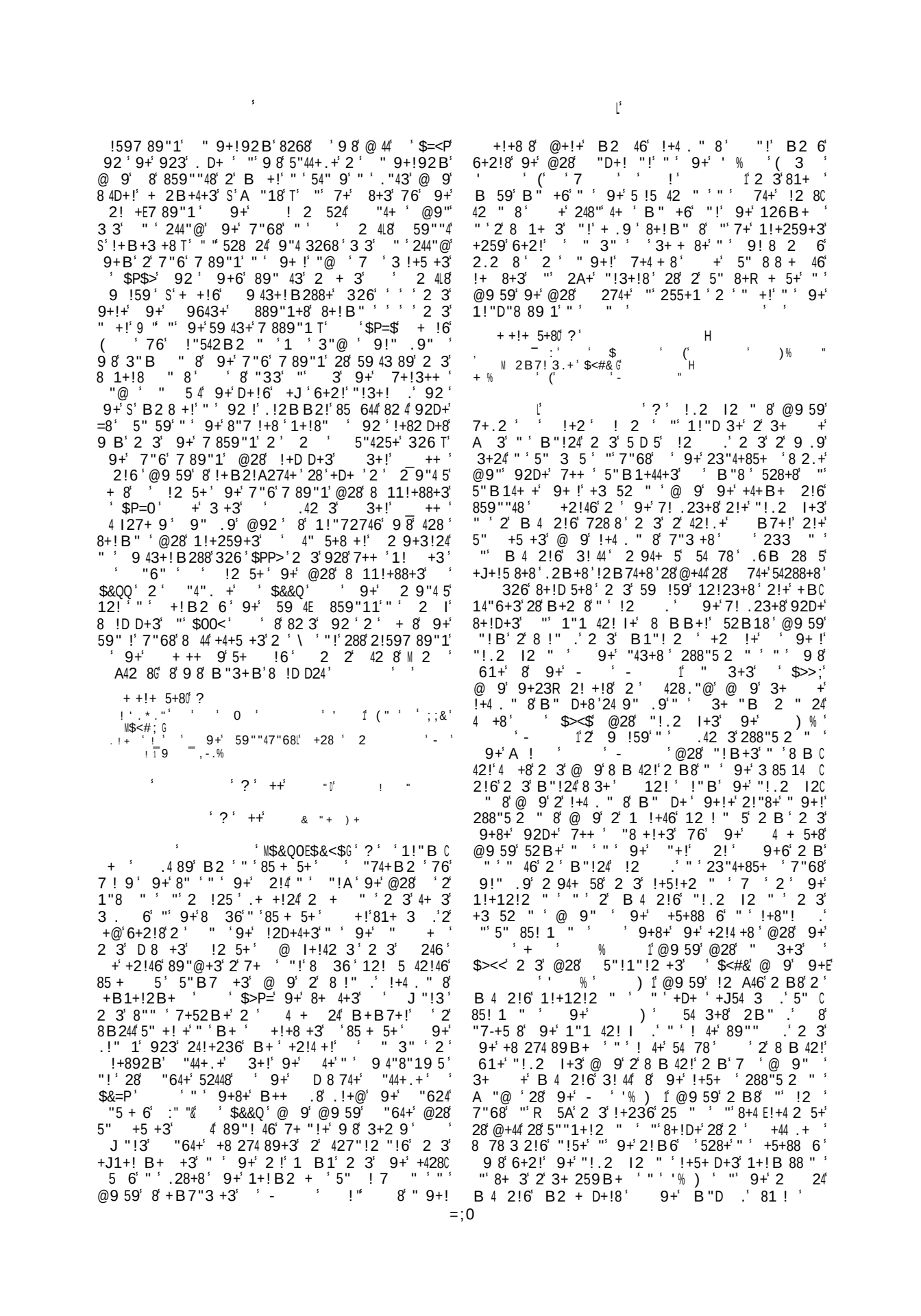

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9+ @9"4+ 9+8+ B"D+B+ 8 !+1!+8+ 2 9+24 96 + 3+ 56 5" +5 " @ 9 2 3 8 1C 14+B+ .9+@"!A" 9+7"68L 54 78 9+6 2!+ 244 5"B7 .+259 1! 5 14+8 " 3 85 14 + 9+41 4 +88 5" ! +86 "7+3 + 5+ 2 3 8+4 E !+4 2 5+ 2 3 "1!"D 3+ 92 5"B!23+89 1 2 3 9+24 96 !+5!+2 " @9 59 2!+ +88+ 24 "23"C 4+85+ 5+ 2 3 @9 59 " 9+!@ 8+ 5" 43 " 7+ 2 2 +3 76 9+ 54288 " 7"68 @9"" 2!+ 9 8 !+259+3 9+ +J5+44+ B"!24 2 3 8"5 24 4 + 5+8 2 3 9+ !2 .2 "!3+3 "B2A+ 9+24 96 5 I+ 8 8 " +5+882!6 9+!+ "81+2A

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@"" !B"!+@++A8 928 7+5"B+ 2 5"B B" 7"68L 54 78 +! 5 +8 2 3 '8"B+ 528+8 42 3 "! 52B1 .1 !1"8+8 8 "@ +3 "! !+ +3 76 9+ 54 7 2 3 8 B2 2.+B+ !+8 8 " 2 8+4 E."D+! .728 8

$<### 8"B+ >### "!<### 7"68 @+!+ !"44+3 9+ 54 78 " " 3" F 2 6 " 9+8+ 92D+ "5" +5 " @ 9 9+ 59 !59+8 112!+ 46 9+ " 3" 2 3 " 9+! .4 89 54 78 B2A+ 4+88 /" 8+4 E."D+! B+ 2 3 12!4 29 + 2!6 42@ 92 3"" 9+ B+! 52 7 " 9+!!+81+5 8 9+6 2!+ R +8 B 42!

9+ 9+"!6 3+!46 .9+ "!B2 " 7"68L 54 78 8 92 59 43!+ !"B $= "!+2!4+!' @9"8+ 9"B+8 2!+ 5!"@3+3 2 3 2 !25 D+ .!+2 46 ++3 8"5 24 4 +2 3 4+ " "" 9+8 8+4D+8 @ 44 3 " 9+ S .2 .T 4 +" 9+ 8 !++ 8 2 3 !21 346 3! "@2!3 B B"!24 6 2 3 5! B+ "8 " 9+ 7"68 !+259+3 2!+ 24!+236 @2.+ +2! +!8 2 3 9+ !+3 " 8"5 24 !+42J2 " 2 3 1968 524 +J+!5 8+ 9+ +D+ .8 +81+5 2446 .!+2 "B+ 54 78 92D+ 3+D+4"1+3 +2 !+8 " 3 8 ! 24 +3 52 " 4+23 .+D+ "" !23+8 +259 .7 9 8 @"!A 8 + +5 D+ " 46 @ 9 8+4+5 +3 .!" 18 " 7"68 2B+8 .6B 28C 58 3+72 .2 3 !+23 .2!+ 9+ 25 D +8 8 2446 " 3 8 55+88 4 7 9+ 32B+ 24 "7-+5 " 9+ 54 7 8 " 8"" B 59 "" .+ 3+ +!+8 4 8 9+8+ 28 "+B14"6 9+B 28 2 @9"4+C 8"B+ + D!" B+ "" A++1 23"4+85+ 59 43!+ " 9+8 !++ "!2@26 !"B 3 8!+1 274+!+8"! 8 42 + 9+2 ! 5248 +!54 7 5" +8 8 2 3 9 8 "!6 54288+8 92D+ 7+5"B+ 1!"B + B+2 8 " 3+D+4"1 .9+ A 3 " 25 D 6 ++3+3 "" 2 !25 2 3 B1!"D+ B+B7+!8

1!25 5+ 7"68L 54 78 2!+ 8 44 9+ +J1+! C B+ 24 8 2.+ 9+ 8 55+88 4 " +8 "@+ 9+ !' 1+!B2 + 5+ " + " B2. + 5 4+23+!8 !2 9+! 92 "" 2 6 12! 5 42!868 +B8 6+ 3+D+4"1+3 "B+ B2A+ 2 +2 !+ " 92!3 @"!A 2 3 !B 9" .9 A 346 3 85 14 +F " 9+!8 244"@ B 59 !++3"B 2 3 8 ! D+ "" 8+5 !+ 5" !"4 42!.+46 9!" .9 8+4 E."D+! B+ "!B .54 78 5" .+8 +3 R 2! +!8 " 5 +8 !25 24 3 +!+ 5+8 " 5" 8 3+!274+ B1"! 2 5+ 92D+ 7++ + 5" +!+3 9+ B"8 B2!A+3 5" !28 8 7+ .7+ @++ 9+ ! 89 2 3 9+ +7!+@8 ! 89 6" 9 92D+ 2 " 3 +88 "!81"! 8 2 3 2 94+ 58 52! .4 4+ "! 9+ B"!+ +44+5 24 "!1 !1"8+ 4 1 !8 8 @9 4+ +7!+@8 52!+ B"8 "!' 9+8+ 42 +! 25 D +8

!"B 9+ 8 2 31" " 8"5 24 +5" "B6 9+ 1!+D+ D+ "! 5" 8 ! 5 D+ 8 . 52 5+ " 7"68L 54 78 8 D+!6 .!+2 2 3 8 7+4 +D+3 92 9+ B"D+B+ 8 "" B1"! 2 "7+ 4+ "" 1! D2 + 19 42 9!"16 2 +@ 5 +8 1 74 5 859""4 7 43 .8 2!+ "@ 4 !+3 "! 54 7 1 !C 1"8+8 2 3 12 3 4+23+!8 +B14"6+3 9 8 3+C D+4"1B+ 8 8 4 +J1+! B+ 24 8 5+ 8 " 1"88 74+ 9+!+ "5 1!"5 !+ 9+ 82B+ 3+.!++ 1+!8" 24 3+D" " 28 928 7++ " 3 9+ 19 42 9!"1 5 3+D+4"1B+ 8 6B 28 B @"!A 2 3 8@ B B .92D+ 1!"D+3 B"8 8 55+88 4

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326 859""48 1426+3 2 D 24 12! 9+ .!"@ 9 9+ "74+! 281+5 8"4 2 59+8 +! ! !2 34+6 "43 9+ 5"B B +2 92 326E 859""48 2 59+8 +! @+! "1+ "! 8+5 42! C 8 ! 5 " "! P 9" !8 " 3268 2 3 "! Q +D+ .8 9+ @++A 9+ 2. " 9+ 859"42!8 D2! +3 !"B P "" QP 6+2!8 2 6 " 9+ 59 4C 3!+ @+!+ "" @"! " @9+ 9+ +D+ . 52B+ "" 9 A0 S 92D+ !+R + 46 8++ 8"B+ " 9+B 284++1 7+ "!+ 9+6 92D+ ." + 9"B+ 2 924 E128 + T ! !2 34+6 5" 8 3+!+3 92 $>;= 9+ B2 25 !+!8 @+!+ M2 428 G 2D"!274+ "" 9+ 8 ! 5 " " 59 43!+ S 2 3 B2 6 " 9+B 9+ B"8 4 7+!24 5" ! 7 "!8 "" " ! 326 2 3 " 9+!859""48 T ! !2 3C 4+6 @ 9 1!"19+ 5 B 3 5" 8 3+!+3 92 2 5"B 1 48"!6 B+28 !+ " +3 52 " @" 43 " 7+ 1"1 42! 2B" . 9+ "1+!2 D+8 " 2 C 59+8 +! 92 @28 " "" 5"B+ "! +2!46 "! 6 6+2!8 : ++ 0 *) ! 0+ &" + +!+ 5+8 ? - B+B" !76 +D 264"! - (%)% " M " 3" $>;<G

? 9 8 +!B 8 8+3 "!3 2!6 12!42 5+ "5"D+!244 " 9+ 9 .9+!12! 8 " 9+ +!D" 868 +B +81+5 2446 9"8+ + 528+3 9+ 8A 44 +59 524 42 . 2.+ 9+ +!B 8 4 4+ 8+3 7+52 8+ 87+ +!" 3+85! 7+ 9+1"! " 8 " 9+ +!D" 868 +B "" @9 59 !+ +!+ 5+ 8 B23+ @ 9 1!+5 8 " 8 .9+ 3+ +2B+8 " 12! 8 ++ 1 * " 0 " M$P>>E$&0;G ? "+ 2 3 2 9"! " 8+D+!24 7""A8 " +!+8 +3 52 " 24 9 8 "!6 9+ @" 7""A8 " 0 7 M$&;#G 2 3 0 7 ! M$&;$G 7+4" ." 9+ 61+ " +3 52 " 24 4 +!2 !+ @9 59 @28 5244+3 " 76 9+ 3+B2 3 "! 5" ! 46 !2 . 9+ "!B+!" 9+8+7""A8 !2 9@2 +3+ +8+3 52C " 28 S 9+ 8+28" +!" ! 8 ! 5 !+88+ " 6" 9 9+ 1! 5 14+8 " A "@4+3.+ 3 85" !8+ 2 3 25 " T 9+ 7 8 " +C @"! 96 "!2 !+B2!A274+ 592!25 +! 2 " 2 8 54"8+ " 2 .+ 4+B2 S 2 B2 " 9 B8+4 +@ 9C " 9+ 233 " " + 9+! 264"! 44+ +! +2B8 +!"! 27+!3289+! T 9+@9"4+5921 +! 8 28 !+B2!A274+ "! 8 4 +!2!6 8 64+ 28 "! 9+ +J5+44+ 1"! !2624 " 9+ 3+24 B2 !2 9C @2 +@28 248"" 9+ 2 9"!" " 2 +!+8 . 9 8 "!6 9+ '% 1 42 +! 592 .+3 " ') (/) (7 M$&;>G @9 59 9+. D+8 8+D+!24 !+28" 8 "! 9+ 8 36 " 9+ 8 7-+5 +1" 8 " 8 D24 + "!8"5 24 !2 . "!+ 274 ." + "S D+ 24 2.+8 T 2 3 " !+5 5 4+ S 9+ !+2 3 9+ 1!+8+ + 8+ T + +!+ 5+8 ? + % (- " % ! & / . 0 (C) 1D !"3 5 " M " 3" $<## G

? "@ 28 %) /) 1 @28 " 3+3 $P&> "@ . 8 2B+ " 2 842 8 "8 8 89"1 " !B42 3 @9" +8 274 89+3 2 :+8 5"44+. 2 !2 87+! $P&P 9+ 8 " 3 +3 " +2!46 9+ + ++ 9 5+ !6 7 @28 !++8 274 89+3 $>$> 2 9+ 8 .2 " " ! 5+ :"8+19 " "9+ I"44+! 76 2 527 + "!3+! " . !+3+! 5A 44 2B ! " ! 88 2 9+ 25 4 +8 " 9+"4".6 2 3 19 4"8"196 24" + 2!+ !+1!+8+ +3 9+ 8 " B7+! ." 46 2 3"I+ 8 ! 5 "!8 2 3 27" =# 8 3+ 8 9+ 4 7!2!6 5" 2 8 QP ###" D"4 B+8 2 3 9+ 2 24 +J1+ 3 !+8 E2B " " 27" d$P ###

M$&P&E$0;#G ? " 3+! " 592! 6 859""48 2 3 12!"59 24 4 7!2! +8 .42 3 2 3 9+ ! 89 5"4" +8 7"! 9!"189 !+ M$&P&G 2 3 +3 52 +3 2 8@+8 !6 59""4 2 3 J "!3 ""A "!3+!8 9+ 9 !59 " .42 3 $&<P 211" +3 76 9+ 89"1 " 3" M "B1 " G 28 9 8 "B B 882!6 "! 59 !59 7 8 +88 2!642 3 9 4+ + C .2.+3 8+ +A ." "! B 88 " 2! +8 "! @"!A 2!642 3 9+ " 3 +5+882!6 " +R 1 8+4+5 +3 52 3 32 +8 @ 9 7""A8 2 3 "7 2 +3 9+9+41 " 8+D+!24 7 89"18 1!"D 3 .X4 7!2! +8 "! 9+ 54+!.6 92 5"4" 6 +J 1!"C -+5 +3 2 859+B+ "! +8 274 89 .8 B 42! 12!"C 59 24 4 7!2! +8 +D+!6 ! !24 3+2 +!6 9!" .9C " .42 3 2 3 24+8 !26!8 !8 5"4" 24 4 7!2!6 @28 +8 274 89+3 2 21"4 8 $&<OE $&<> +3 23D"52 +3 9+ +8 274 89B+ 2 !" +8 2 5" .!+.2 " "! 9+ !"12.2C " " 9+ 2 9 ! B+! 52 " 2 .4 52 "!.2 I2 " "! B 88 " 2!6 @"!A @ 9 1 !1"8+8 2 24"." 8 9+ 5" .!+.2 " (" 9+ "B2 2 9"4 5 9 !59 2 +2 3 " 7+ ." "! 95"B ." "! 9 8 + +!1! 8+ !26 42 3 2 142 "! 9+ +8 27C 4 89B+ " 2 D"4 2!6 8"5 + 6 @9 59 7+52B+ 9+ "5 + 6 "! !"B" ." 9! 8 2 "@4C +3.+ #:" "& 9+ !8 8A+ 59 " 9+ "7-+5 8 " 9 8 "5 + 6 ? @9 59 54 3+3 592! 6 859""48 9+ +8 274 89B+ " 12!"59 24 4 7!2! +8 2 9"B+ 2 3 27!"23 2 3 B 88 " 8 7" 9 "5"4" 8 8 2 3 2 D+8 ? @28 8 7B +3 76 !26 " 2 8B244 B++ . 2! > $&<>E$&<< $&<< !26 82 4+3 "! 2!642 3 7 8 78+R + 46 !+ ! +3 " .42 3 " 52!!6 " 9 8 42!.+! 142 8 "! B 88 " 2!6 @"!A $0#$ 9+ "7 2 +3 !"B .' 44 2B 2 592! +! "! 9+ 5"!1"!2 " " 9+ "5 + 6 "! 9+ !"12.2 " " 9+ "81+4 #:" "& +@28 9 8 9+ 2 9+!" 9+ @" "43+8 8"5 + +8 " 9+ 9 !59 " .42 3 $0#< 9 8 + "! 8 4+3 2!4 2B+ " " 1288 2 5 S "! 9+ 7+ +! 1!+8+!D2 " " 2!"59 24 7!2! +8 .42 3 T +3+D" +3 9 B8+4 44 9 8 3+2 9 $0;# " 9+ "!.2 I2 " " 592! 6 859""48 .42 3 9+ " 32 " " 54+! 5) 7!2! +8 2 3 9+ 1!"D 8 " " 859""48 "! 9+ +.!"+8 "! 9 B+! 52 9+ 592! 6 859""48 #:" "& @9 59 !26 @28 59 + 46 8 ! B+ 24 +8 27E

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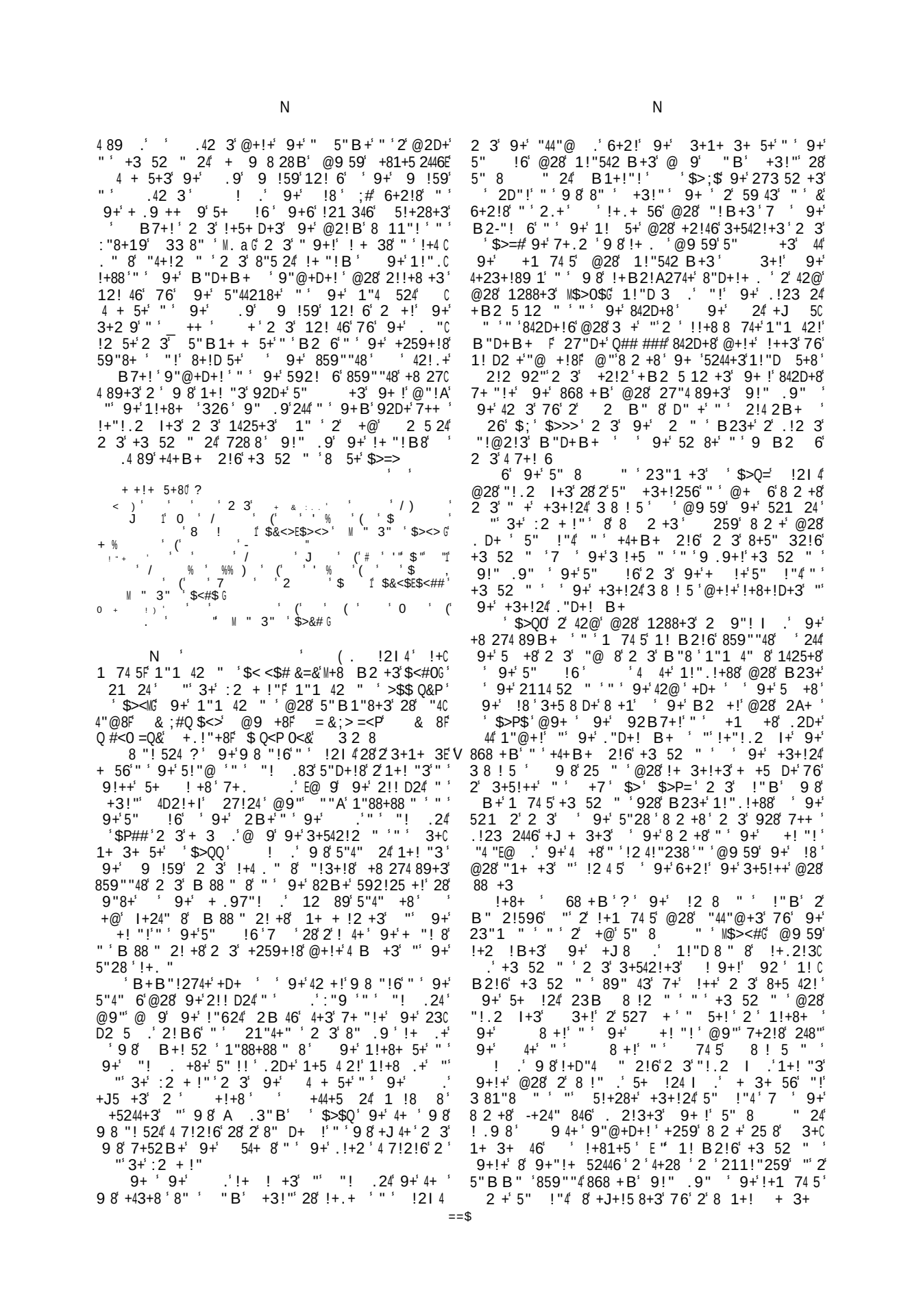

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9+ˢ 1! B2!6ˢ 859""4ˢ @9+!+ˢ 446ˢ "!.2 I+3ˢ 5"B1! 8+8ˢ @"ˢ 3 D 8 " 8ˢ 9+ˢ +4+B+ 2!6ˢ 1! C B2!6ˢ "!ˢ 1 1 48ˢ 0ˢ "ˢ $;ˢ 6+2!/8ˢ " ˢ2.+ˢ 2 3ˢ 9+ˢ 9 .9+!ˢ1! B2!6ˢ "!ˢ1 1 48ˢ $;ˢ "ˢ $Pˢ 9+ˢ5" !8+ˢ " ˢ8 36ˢ "!ˢ 9+ˢ+4+B+ 2!6ˢ1! B2! +8ˢ 54 3+8ˢ 9+ˢ "! . +8+ˢ42 . 2.+ˢ 9+ˢ B+ ! 5ˢ 868 +B ˢ +4+B+ 8ˢ " ˢ .+".!2196ˢ 2 3ˢ 9 8 "!6ˢ +81+5 2446ˢ " ˢ !2I 4ᶠ !"3 5 "!6ˢ 4+88" 8ˢ ˢ 1968 524ˢ 85 + 5+ˢ 2 3ˢ 2 !24ˢ 9 8 "!6ᶠ B"!24ˢ 2 3ˢ 5 D 5ˢ 8 ! 5 " ᶠ 3!2@ .ˢ+4+B+ 8ˢ " ˢ B 8 5ᶠ .6BC 28 58ˢ2 3ˢ B 4 2!6ˢ+J+!5 8+8ᶠ B2 24ˢ !2 .ˢ "!ˢ 7"68ˢ 2 3ˢ ++34+@"!Aˢ "!ˢ. !48ᶠ 1!25 5 3ˢ 3+28ˢ " ˢ8 !D+6 .ˢ 9+ˢ 5" !8+ˢ "!ˢ 9+ˢ 9 .9+!ˢ 1! B2! +8ˢ2338ˢ "ˢ 9+ˢ27"D+ˢ8 3 +8ˢ+4+B+ 8ˢ " ˢ !+ 59ᶠ 9 .9+!ˢ2! 9B+ 5ᶠ +4+B+ 2!6ˢ24.+7!2ᶠ .+"B+ !6ˢ2 3ˢ ! ." "B+ !6ᶠ +4+B+ 8ˢ " ˢ1968 C 524ˢ 85 + 5+ˢ 2 3ˢ 2 !24ˢ 9 8 "!6ˢ 28ˢ 2114 +3ˢ "ˢ 3 8 ! +8ˢ 2.! 5 4 !+ˢ 96. + +ˢ +4+B+ 8ˢ " ˢ 2 " 24ˢ 42@ˢ 2 3ˢ 1"4 524ˢ +5" "B6ᶠ 3!2@ .ˢ "! 2B+ 24ˢ B+592 524ˢ 2 3ˢ "1".!219 524

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!2 .ˢ" ˢ +259+!8ˢ ?ˢ "!B24ˢ859""48ˢ 2!+ˢ B2 2 +3ˢ ˢ244ˢ 9+ˢ8 2 +8ˢ" ˢ !2I 4ˢ2 3ˢ28ˢ2ˢ ! 4+ˢ 2!+ˢ 8 2 +3ˢ ˢ 9+ˢ 59 + ˢ 5 +8ˢ 2 3ˢ 1!"C D 3+3ˢ @ 9ˢ ! 46ˢ 1242 24ˢ 7 43 .8ˢ 9+ˢ 9+"!6ˢ " ˢ1!" +88 " 24ˢ !2 .ˢ 8ˢ 9 .946ˢ3+D+4C "1+3ˢ2 3ˢ 9+ˢ "!B24ˢ859""48ˢ 2!+ˢ 1!".!+88 D+ˢ 2 3ˢ 9"!" .9ˢ 9+ˢ5" !8+ˢ " ˢ 8 ! 5 " ˢ2 3ˢ !2 .ˢ 5"D+!8ˢ =ˢ 6+2!8ˢ 54 3 .ˢ @"!Aˢ ˢ 9+ˢ 1!25 5+ˢ 859""4ˢ 9+ˢ "!B24ˢ 859""4ˢ 2ˢ ˢ 2 4ˢ 5"B1! 8+8ˢ 2ˢ B2 +! 24ˢ 859""4ˢ 2ˢ 1! B2!6ˢ 859""4ˢ "!ˢ 7" 9ˢ 8+J+8ˢ 5"B 14+B+ 2!6ˢ "!ˢ 9 .9+!ˢ 1! B2!6ˢ 859""48ˢ 2 3ˢ @"ˢ "!B24ˢ 8+5 " 8ˢ " +ˢ "!ˢ B+ ˢ 9+ˢ " 9+!ˢ "!ˢ @"B+ ˢ 9+ˢ "!B24ˢ859""4ˢ2ˢ "ˢ@28ˢ4 B +3ˢ "ˢ@"B+ ˢ 4ˢ $<##ˢ@9+ ˢ 9+ˢ +J2B 2 " ˢ@28ˢ 9!"@ ˢ "1+ ˢ "ˢ 6" .ˢ B+ ˢ248"

9+ˢ 1+32.". Bˢ 8ˢ 2ˢ 2 " 24ˢ 8 " ˢ 5!+2 +3ˢ 1! B2 46ˢ "ˢ 52!!6ˢ " ˢ 9+ˢ !+ "!B8ˢ ˢ +3 52 " ˢ 2 +3ˢ 76ˢ + -2B ˢ " 8 2 ˢ 7 ˢ ˢ928ˢ7+5"B+ˢ2ˢ.+ +!24ˢ5+ +!ˢ" ˢ 4 + 5+ˢ 5"B1!+9+ 3 .ˢ ˢ 8ˢ 85"1+ˢ 244ˢ 3"5 ! +8ˢ 2 3ˢ .!23+8ˢ " ˢ +3 52 " ˢ 9+ˢ 8 " ˢ 1 7C 4 89+8ˢ 2ˢ B2.2I +ˢ + 4+3ˢ ˢ$ % 1ˢ 2 3ˢ" 9+!ˢ@"!A8ˢ!+42 .ˢ "ˢ+3 52 " 24ˢB2 +!8ˢ ˢ 9"438ˢ +D+ .ˢ 8+88 " 8ˢ "!ˢ 3 88+B 2 .ˢ "!B2 " ˢ !+81+5 .ˢ 2.!5 4 !24ˢ 85 + 5+ˢ 1+32.".6ˢ 2 !24ˢ 9 8 "!6ˢ 2 3ˢ B"!24ˢ 2 3ˢ 5 D 5ˢ +3 52 " ˢ 28ˢ @+44ˢ 28ˢ 5" D+ " 8ˢ " ˢ 4 +!2!6ˢ B+ ˢ2 3ˢ @+44EA "@ ˢ1!" +88"!8ˢ ˢ 8ˢ 4"52 +3ˢ ˢ 9+ˢ7 43 .ˢ" ˢ 9+ˢ 523+B 2ˢ !2I 4 +!2ˢ 3"ˢ + !28ˢ " 3+3ˢ "ˢ "8 +!ˢ 9+ˢ 2 " 24ˢ42 . 2.+ˢ 2 3ˢ4 +!2 !+

J 4 2!6ˢ .+ 5 +8ˢ ?ˢ +8 3+8ˢ 9+ˢ 1 74 5ˢ 859""48ˢ B2 2 +3ˢ 76ˢ 9+ˢ 8 2 +8ˢ 9+!+ˢ 2!+ˢ B2 6ˢ859""48ˢ+8 274 89+3ˢ76ˢ 9+ˢ!+4 . " 8ˢ"!3+!8

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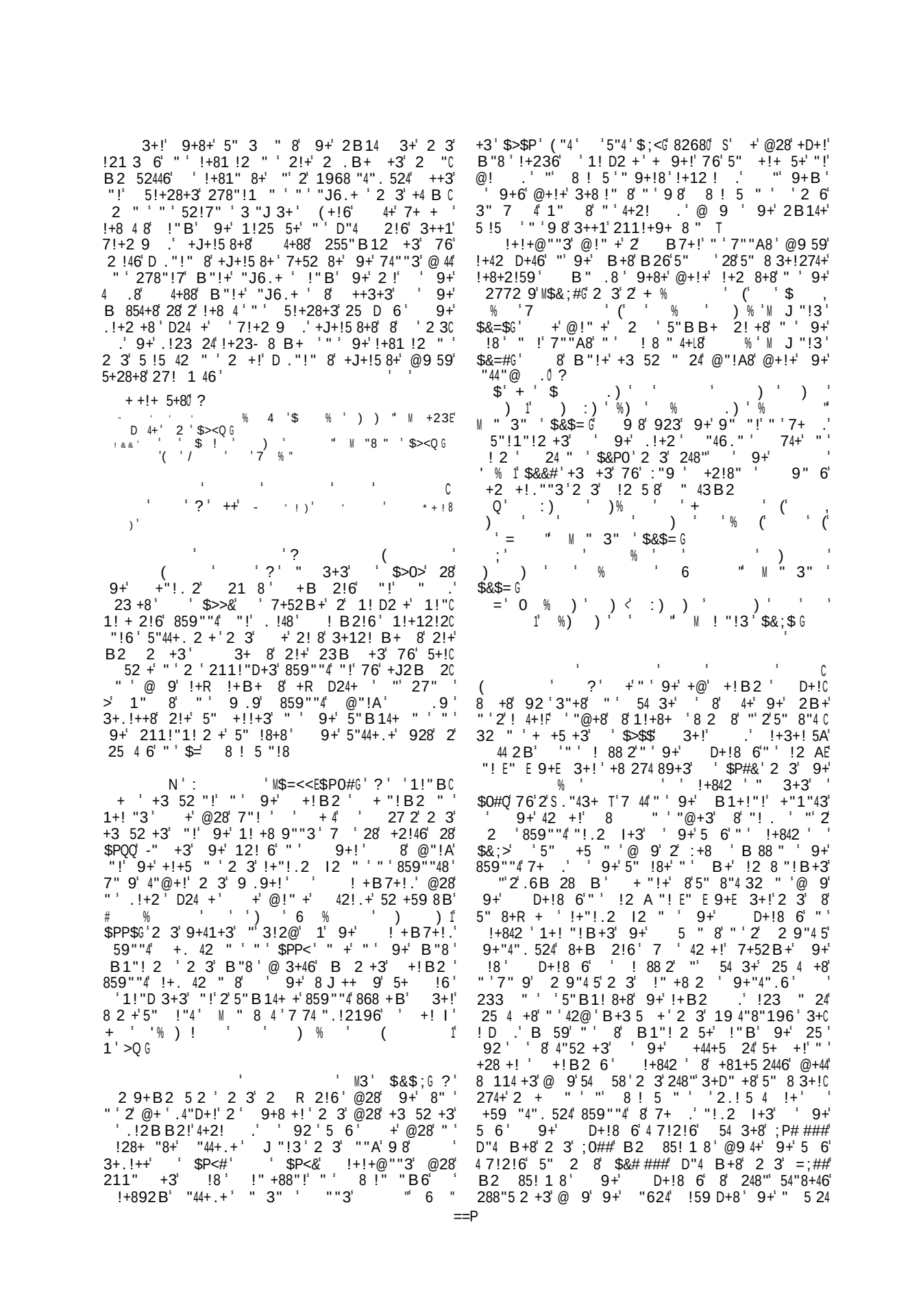

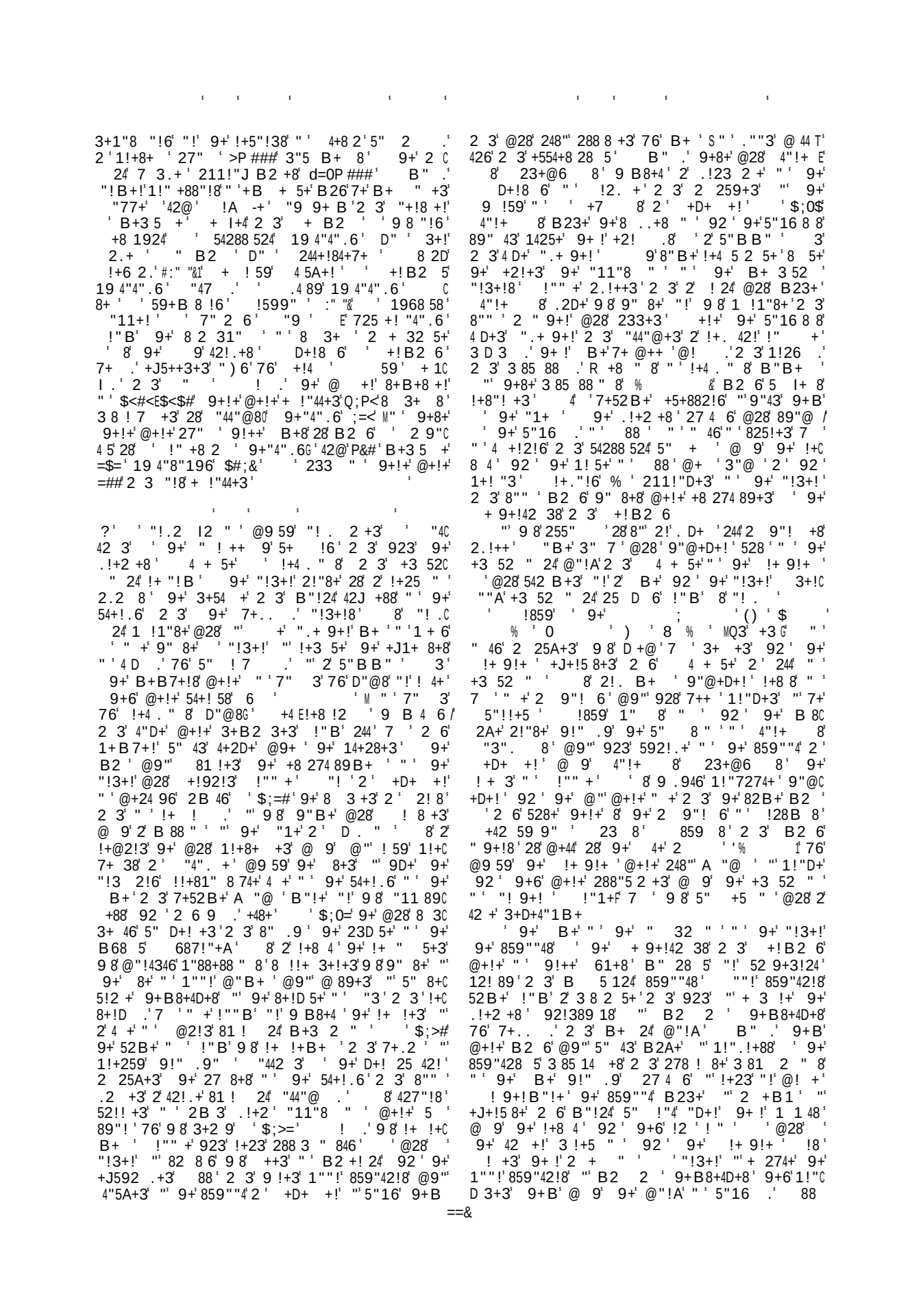

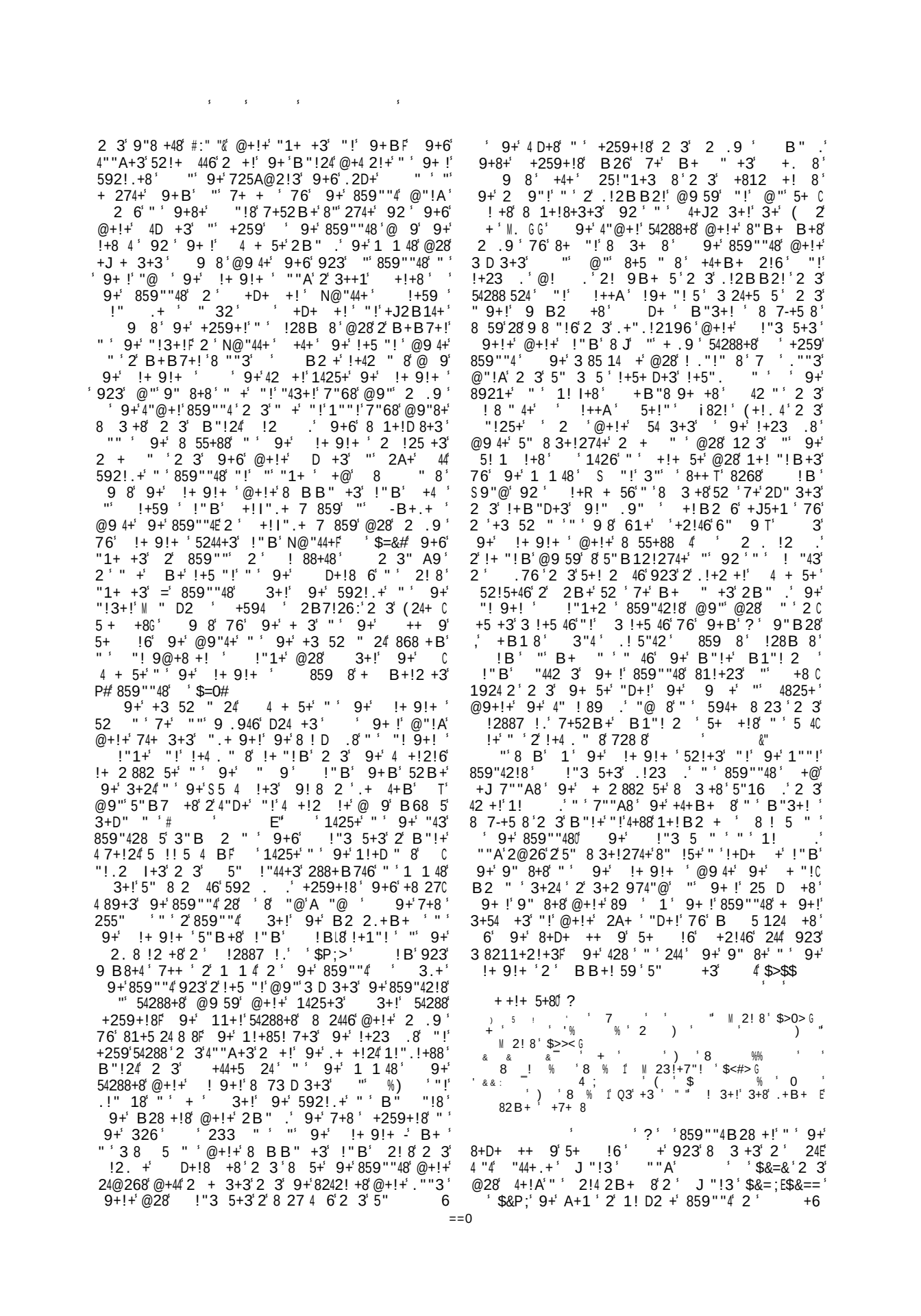

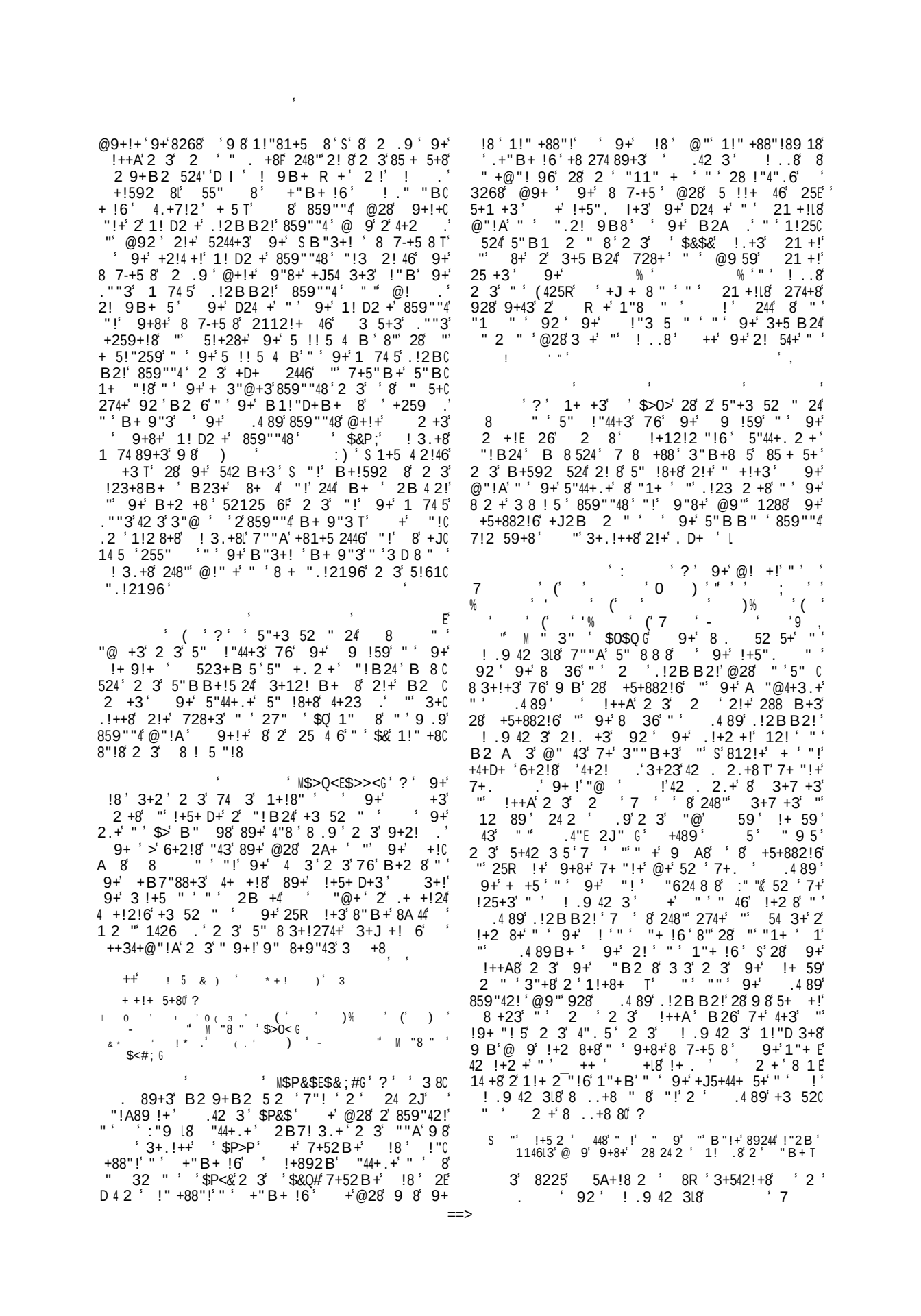

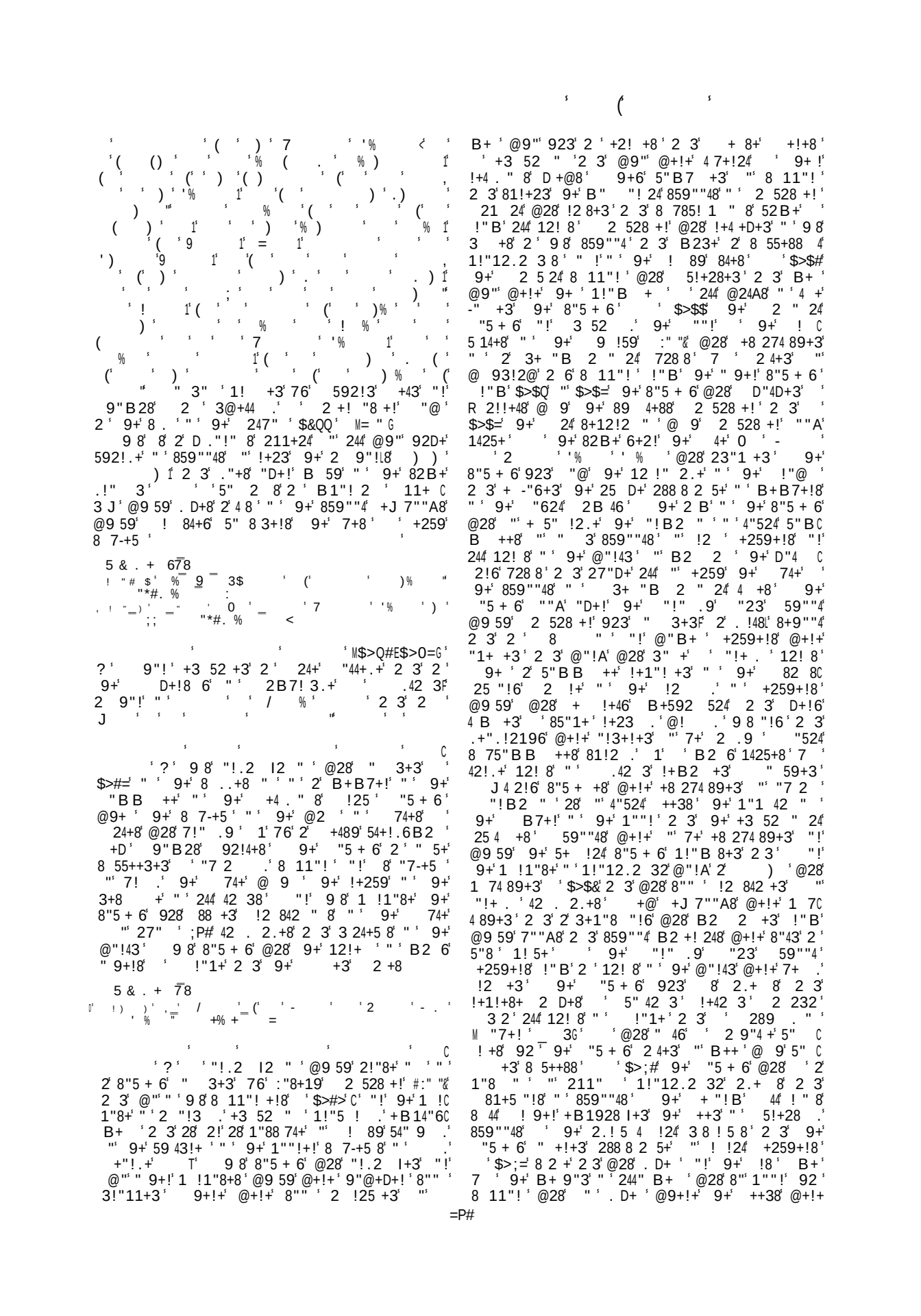

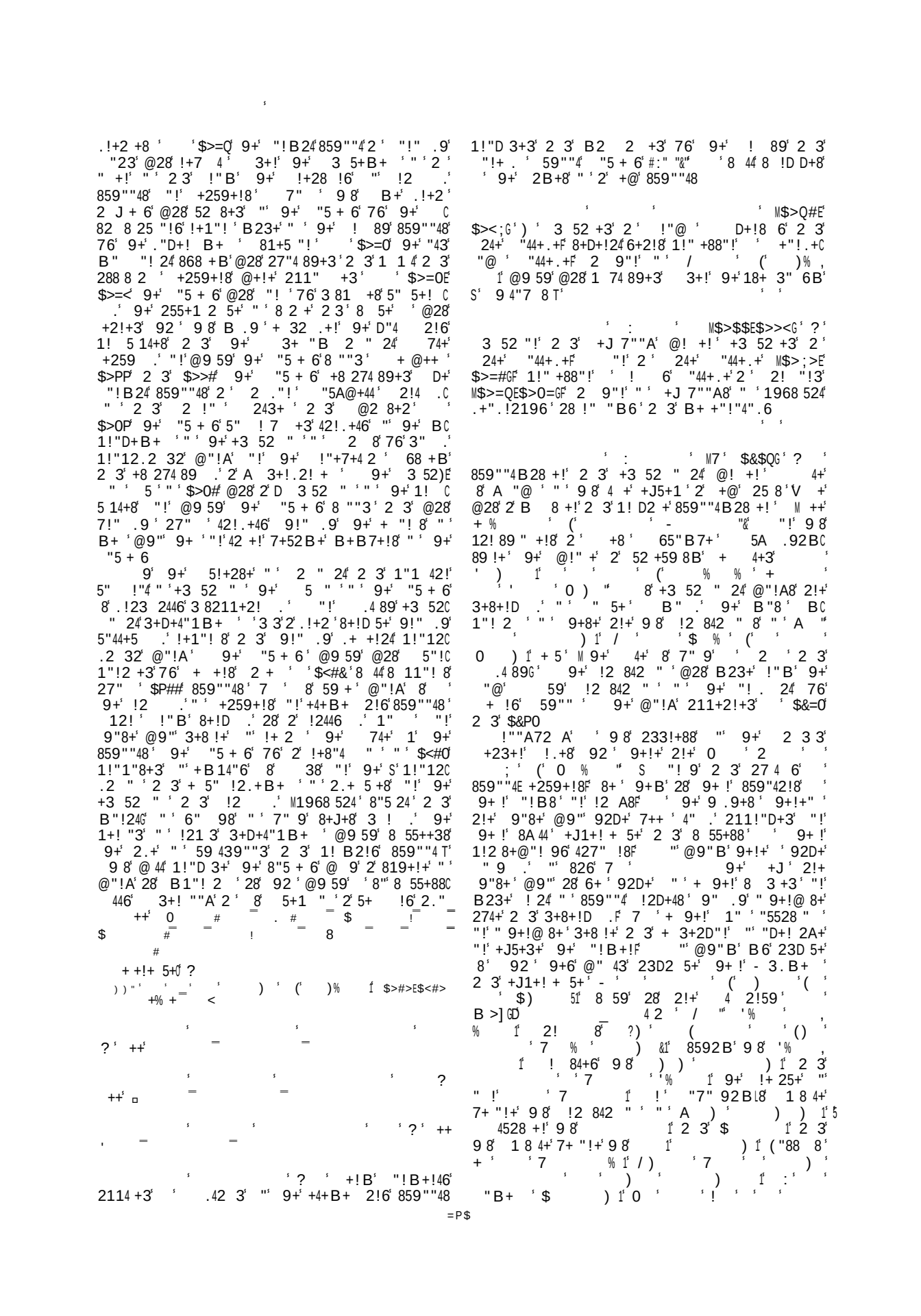

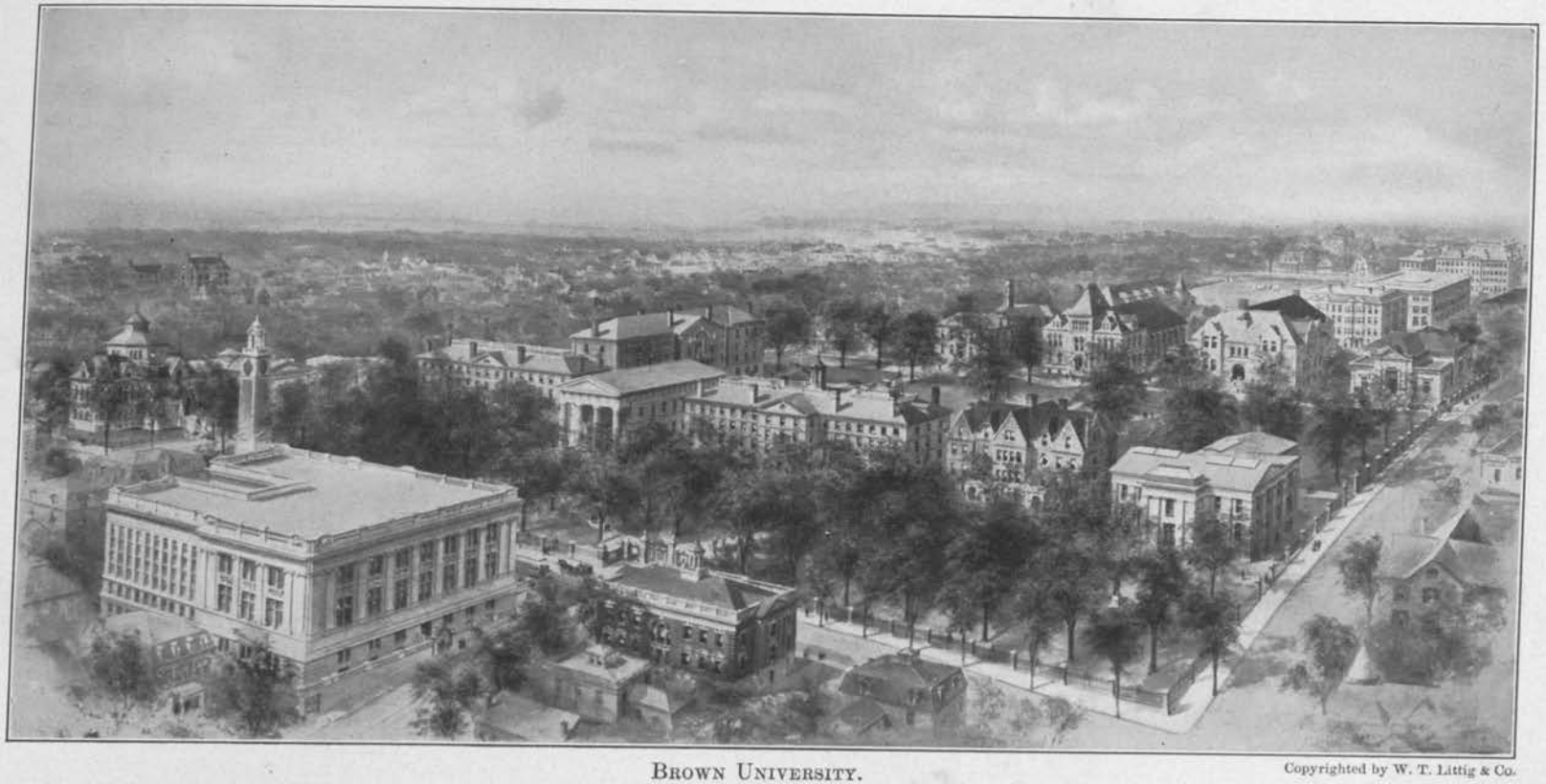

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= 2 M$>$;E$>>PG ? 3 52 "!' 2 3 2 9"!' +3 52 +3 1! D2 + 859""48 2 3 2 5 2! B" 9 "44+.+F +259+!' 9+ 9 .9 859""4 2 44 . " " " M$>;QE $>;=GF 1! 5 124" " 77" 523+B6 2 3"D+!' M$>;PE$>;>GF 1!" +88"!' 2! B" 9 "44+.+ M$>=#E$>&OGF 1!+8 3+ " " 2B 4 " "44+.+ M$>&OE$>>$GF 2 9"!' " ' ('% "

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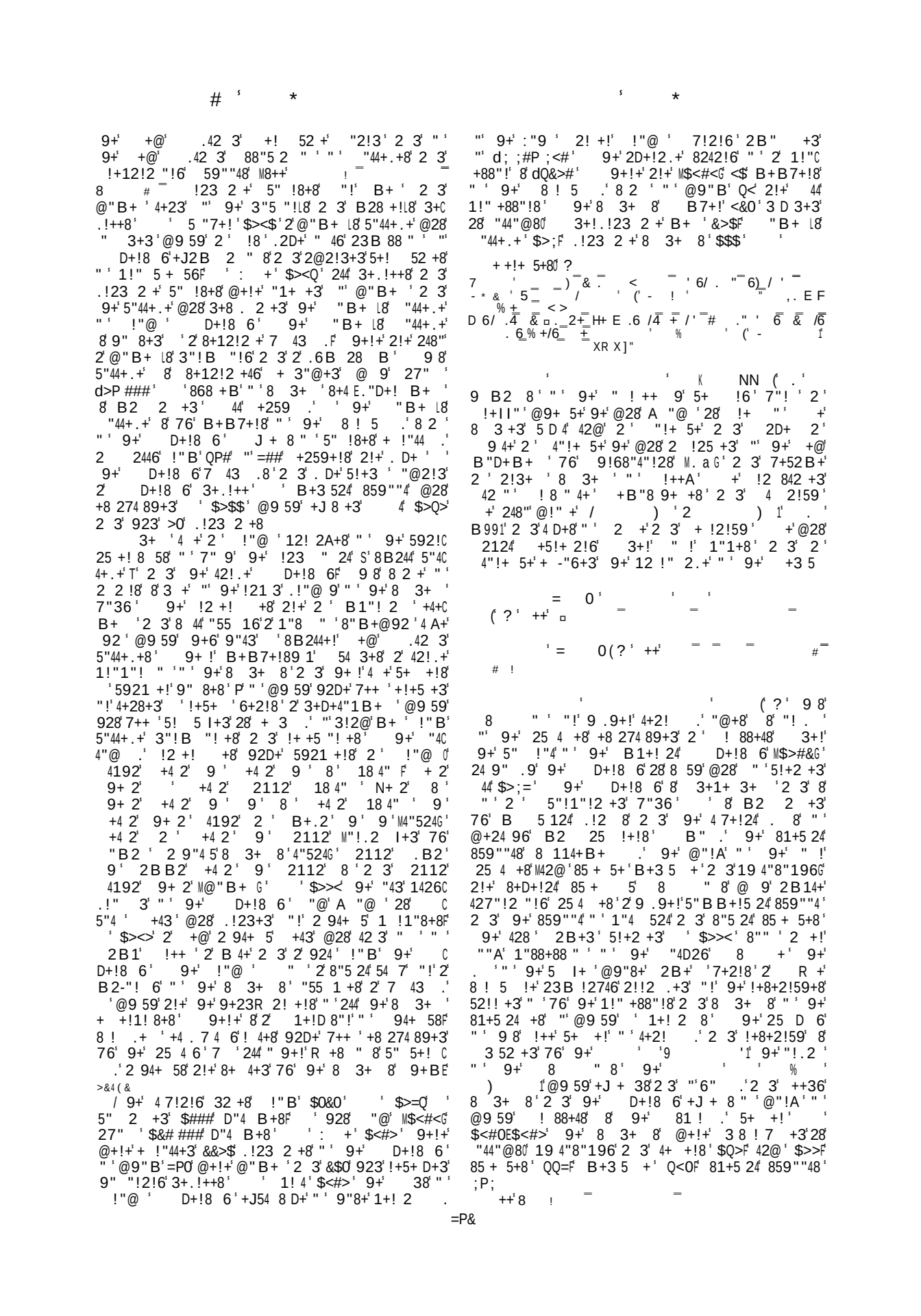
9+ !8 1!+8 3+ @28 9+ +D :2B+8 2 B ." +4+5 +3 +1 =' $0&P 2 .!23 2 + " ! 5+ " M$0&QG $0&< 9+ !8 54288 " 9"3+ 842 3 "44+.+ @28 .!23 2 +3 2 2!!+ F $00# 9+ 1!+8+ D+!8 6 244 B"3+4+3 2 +! 2882 244 ! 5+ " @28 +!+5 +3 " 9+ 5"44+.+ .!" 38 !"D 3+ 5+ 59 + 46 76 8 785! 1 " 8 !"B !+8 3+ 8 " 92 5 6 9+ !8 5"44+.+ 38 2B" ." "' d=P## @+!+ 5"44+5 +3 .42 3 A 3 !+42 3 $0&0E$0&> $>#= 9+ 2B+ @28 592 .+3 "' !"@ D+!8 6 9" "! " 59"428 !"@ $0>& 2 7+ + 25 "! 9+ 8 55+88"!8 " 1!+8 3+ 2 .244 " 9+B 21 8 54+!.6B+ 92D+ 7++ 0 :" 2 92 2J56 $0<QE$>#QF 882 +88+!' $>#QE$>Q&F !2 5 8 2642 3 $>QOE $>PPF 2! 28 +2!8 $>PPE$>&0F 4+J 8 28C @+44 $>&>E$>0QF I+A +4 "7 8" $>0QE $>><F 4 892 3!+@8 $>><E$><>F 2 3 44 2B 5+ $><E ! !+8 3+ 2642 3 !+"!.2 I+3 9+ 8 3 +8 " 2 +4+5 D+ 728 8 +8 274 89+3 2 ;E6+2! 5" !8+ "! 9+ 72552C 42 !+2 + + 5" !2.+3 .!23 2 + !+8+2!59 2 3 B23+ 9+ 85 + 5+8 1!"B + 9+ 5 !! 5 4 B ! .' 9+ 23B 8 !2 " " !+8 3+ C 3!+@8 9+ B7+!' " 8 3+ 8 5!+28+3 !"B Q>& "' >&# 9+ B7+!' " .!23 2 + 8 3+ 8 !"8+ !"B ;' "' $#$ 244 9+ "43 3+12! B+ 8 @+!+ !+"!.2 I+3 2 3 +@ 3+12! B+ 8 233+3 9+ 38 !+259+3 d$ $QP &>P 2 3 B1"! 2 233 C " 8 @+!+ B23+ "' 9+ 7 43 .8 2 3 .!" 38 +6+2!' 2 +!' 9+ 2 . !2 " " !+8 3+ 2 5+ 9+ + 3"@B+ @28 5!+28+3 76 d$ ### ###' 2 8+5" 3 B 44 " 7+ .' 233+3 2 6+2!' 42 +!' 9+ 8 33+ 5!+28+ 9+ B7+!' " 8 3+ 8 5" 5 3+ @ 9 9+ 255+88 " " 9+ +@ 1!+8 3+ B23+ 7" 9 +! 24 2 3 +J +! 24 !+"!.2 I2 " +++882!6 9+ $# 6+2!8 8 5+ $><< 9+ 25 4 6 928 7++ !+"!.2 I+3 & +@ 592 !8 " 8 ! 5 " 92D+ 7++ 5!+2 +3 2 3 44+3 2 3 9+ B7+!' " 5" !8+8 " +!+3 928 5!+28+3 !"B >;' "' $$< 9+ .!23 2 + 3+12! B+ 928 7++ 446 "!.2 I+3 9+ 3+12! B+ 8 " D 4 2 3 +592 524 . C ++! .' 92D+ 7++ 8 244+3 2 446 +R 11+3 + . ++! .' 7 43 . ' 8 B B+!' +J1+! B+ 8 2 " !' 7 "4". 524 8 36 928 7++ "1+ +3 2 2!@ 5A 3+!' 2 2!!2 .+B+ @ 9 9+ 9"3+ 842 3 59""4 " +8 . 9+ D+!8 6 8+ 38 8 2! 8 3+ 8 "' 9+ 59""4 " +8 . "!' 8 ! 5 " 3!2@ . 2 3 12 . ! + ! "!' @9 59 1! D 4+.+ 9+ 59""4 " +8 . 8+8 9+ D+!8 6 8 B259 + 89"18 868 +B " D 8 . 5"B B ++8 8 B 42!' "' 92 "!5+ 2 2!D2!3 D+!8 6 D"4D+8 9+ 211" B+ " 27" $P# B+ !"B' 7 8 +88 "!' 1!" +88 " 24 4 + P "' $# "! +259 3+12! B+ @9"' 2 2446 81+5 9+ 5" !8+8 " 8 36 427"!2 "! +8 2 3 +R 1B+ !"@ D+!8 6 B2 2 8 3+!.!23 2 + 5" !8+8 "!' B+ 2! 8 1 !+ 85 + 5+ 2 3 +4+5 ! 524 2 3 +592 524 + . ++! .' 4+23 ." 9+ 211!"1! 2 + 3+.!++8 23B 88 " 8 76 +J2B 2 " 2 3 5+! 52 + !"B 211!"D+3 9 .9 859""4 9+ D+!8 6 8 2 B+B7+!' " 9+ "44+.+ !2 5+ J2B 2 " "2!3 "



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(? ' ' 5"44+.+' "!' @"B+ ' 8 2 +3' ' 9+'
8 7 !78' " ' 9 423+419 2 ' " 3+3' 76' !' :"8+19'
' 264"!' ' $>>#' 9+' 5"44+.+' @28' "1+ +3'
"!' 8 ! 5 " ' ' 9+' 2 B ' " ' $>>P' 9+'
5"44+.+' .!" 38' 5"D+!' PQ' 25!+8 ' " ' @9 59' 2!+'
4"52 +3' ;' 7 43 .8 ' @9 59' 54 3+' 9+' 4 7!2!6 '
4+5 !+' !""B8' 2 3' 427"!2 "! +8 ' J' 3"!B C
"! +8' 2!+' 1!"D 3+3' "!' 9+' 8 3+ 8 ' 9+'
8 3+ 8' 2!+' 3 D 3+3' "' ;' 54288+8' ? ' .!23 2 +'
3+!.!23 2 +' 2 3' 9+2!+!8 ' ' 42!.+' B7+!'
" ' +44"@89 18' 2 3' 859"42!89 18' 2!+' " +!+3' '
9+' .!23 2 +' 859""4 ' "!' + !2 5+' "' 9+'
3+!.!23 2 +' 3+12! B+ ' 52 3 32 +8' B 8 '
1288' 9+' B2 ! 5 42 " ' +J2B 2 " ' " ' 9+'
5"44+.+' 9+' !+R !+B+ 8' "!' @9 59' 2!+' +R D2C
4+ ' 3' $0 P' 8' 9+' +J2B 2 " ' " ' 9+'
"44+.+' !2 5+' J2B 2 " ' "2!3' #:" "&'
8' 255+1 +3' 28' 2 ' +R D24+ ' " !8+8' 2!+'
" +!+3' 4+23 .' "' 9+' 3+.!+' " ' ' ' 7 ' 52 3 C
32 +8' B 8 ' +4+5 ' 9+ !' 5" !8+8' ' 255"!32 5+'
@ 9' 9+' !" 1' 68 +B' #:" "&" 9+' 9+2!+!8'
2!+' 23B +3' "' 9+' 5" !8+8' 3+!' 5+! 2 ' 5" 3 C
" 8 ' 7 ' B26' " ' 1!"5+3' "' 2' 3+.!++' '
$<#<E$<$#' 9+!+' @28' 2 ' + !"44B+ ' " ' =QP'
8 3+ 8 ' " ' @9"B' >>' @+!+' .!23 2 +8 ' 9+'
25 4 6' 54 3+8' $#' 1!" +88"!8 ' $=' 288"5 2 +'
1!" +88"!8 ' 2 3' ;' 288"5 2 +8 ' !+23+!8 ' 4+5 !+!8 '
2 3' 3+B" 8 !2 "!8 ' 9+' 1!+8 3+ ' 8' ' 2!+6'
9"B28 ' 9 '

' 2 2 ' M$P#&E$P>QG ' ?'
' 9 B2 8 ' 2 3' +3 52 " 8 ' " ' +B + 5+ ' @9"'
@28' 1425+3' 76' 9 8' 5" +B1"!2! +8' ' 9+' D+!6'
!" ' !2 A' 28' 2' 859"42!' 2 3' 2' 1"+ ' "! ' 2 '
44+2! ' ' 9+' 5" 6' " ' !4 . ' 5" 42 3 ' 9+'
7+52B+' 2 ' 9+' 2.+' " ' $=' 2' 8 3+ ' 2 ' 9+'
D+!8 6' " ' 2! 8 ' 2 3' 9 8' 4 +' !"B' 92 ' B+'
4' 8' + 3' @28' 3+D" +3 ' 24B"8 ' @ 9" ' 2'
7!+2A ' "' +3 52 " ' 2 3' 4+ +!8 ' +' !+81" 3+3'
2 ' 2 ' +2!46' 1+! "3' "' 9+' +@' 81 ! ' 92 ' @28'
28 ' 81!+23 .' "D+!' +8 +! ' !"1+' 2 3' 28' 2'
9 B2 8 ' 2 25A+3' 9+' 72!!+ ' +259 .' " ' 9+'
859""4B+ ' 2 3' 9+' . "!2 5+' 2 3' 8 1+!8 " '
" ' 9+' "B2 ' 1! +8 9""3 ' 8' 2 D+' 5" !6'
@28' 2 +5 +3' 76' 9+' + 2 882 5+' 2 3' +D+ '
9+' D+!8 6' " ' 2! 8 ' "' @9 59' 9+' !+ ! +3'
2 +!' 81+ 3 .' 2' +@' 6+2!8' M$PQQE$PQ&G ' 5" C
42 3 ' @28' 3"B 2 +3' 76' 859"428 5 8B ' C
592 2 ' 9"@+D+!' !"3 5+3' .+ +' 54288 524'
8 3 +8' "' 9+' "44+.+' " ' +' 2!7+' " ' @9 59'
9+' @28' !+.+ ' 2 3' 8 . 24 I+3' 9 8' J1 !+' @ 9'
9+' 9 !59' " ' "B+' 76' @! .' 9!++' 82 !+8'
" ' 9+!' 54+!.6 ' 9+' ') 1' $ 1' 2 3'
2 % %) " +' 248"' 23D"52 +3' ' 9 8' + '
A) ' ' 9+' ! .9 8' " ' 8 7-+5 8 ' 2 3' 9+43' 92 '
A .8' @9"' ! 4+3' -!!2 52446' 89" 43' 7+' 3+C
9!' +3 ' 592 2 l8' 9 B2 8B' 3 3' " ' 2A+'
9+' "!B' " B+!+' D+!724' 859"42!89 1 ' +' 8+3'
9+' 2 ' " . +' 28' 2' B2 ' " ' 4+ +!8' "' 5" D+6'
"' +3 52 +3' !"1+' 9 8' D +@8' " ' 1 74 5' 2 2 !8'
2 3' 9 8' 5! 5 8B8' " ' 9 B2 ' 9 + ' 8' !+24' @"!A '
9"@+D+!' @28' 92 ' " ' 2 ' +3 52 " 8 ' 9 8'
@28' " ' 8"' 54+2!46' !+5". I+3' 76' 9 8' 5" +B1"C
!2! +8 ' @9"' @+!+' B1!+88+3' 59 + 46' 76' 9 8' 859"42!E
89 1' 2 3' 9 8' 1"+ 5' . 8 ' ' ' 8' "@' .+ +!C
2446' 23B +3' 92 ' 9+' B1+ 8' @9 59' 9+' .2D+'
"' 9+' 52 8+' " ' +3 52 " ' ' 5" 42 3' 928' 7++ '
" ' B"!+' D24 +' "' 9 8' 5" !6B+ ' 92 ' 9 8' .!+2 '
!+1 2 " ' 28' 2' 1"+ ' 9+' 59 +' 7 8 +88' " ' 9 8'
4 +' !"B' 9 8' @+ + 9' 6+2!' "' 9 8' 3+2 9' @28' 9+'
+259 .' " ' 6" 9 ' +' @28' 2' 1!" +88"!' 8 5C
5+88 D+46 ' 2 ' 9+' "44+.+' " ' +' 2!7+' 2! 8F
9+' "44+.+' 3+' 6+ +' "!3+2 J' 2.2 ' '
2! 8' ' 9+' "44+.+' 3 ' 2!3 2' +B" +F
2 3' ' 9+' D+!8 6' " ' " B7!2' ' "! .24 '
8' 428 ' 859"428 5' 211" B+ ' @28' 9+' 1! E'
5 12489 1' " ' ' +" 2!3l8' "44+.+' ' 3!+@8 '
5" 42 3 ' +' 25 +3' 248"' 28' "!' "' 9+' 8" ' " '
9+' 2!4' " ' 288 8' "' 2 ' 44+. B2 +' 8" ' " '
:2B+8' (' " ' 5" 42 3 ' "' 9+' 8" ' " ' 9+' 2B " 8'
2!&592' 4+' ! 8825 ' 2 3' "' .' :2B+8' (' " '
5" 42 3 ' 9 8' 428 ' 1"8 ' 9+' "B 2446' 9+43'
4' 9 8' 3+2 9' ' $P>Q ' "!' ' 9 8' +8 2B+ '
32 D+' 9+' 8' 3+85! 7+3' 28' S' 1!+5+1 " !' "' 6+'
.+l8' B2-+8 6+' 9+' 6B+' " ' 9 8' 3+5+ 8 T' 8"'
92 ' 9+' B26' 7+' 82 3' "' 92D+' 3 +3' +259 .'
9 8' 3++3' 8' 4 +!2446' ! +' "!' :2B+8' +4D 44+'
!+5"!38' 92 ' D 8 .' 9 B' ' 9 8' 428 ' 44 +88 '
24" .' @ 9' 9 8' 54+' 3!+@' +4D 44+ ' 2 3'
9"B28' 592 2 ' 9+6' " 3' 9 B' 8 .' '
9 8' 592 !' S' +259 .' 9 8' 6" .' B2 ' 92 ' 8+!D '
9 B' ' 9 8' 924B+!' "' 81+44' 2 ' 7 ' 27F' +' 7 ' +7F'
,5 ' +!' 824 2 " ' ! 3!"' 826+8 ' \' ' 8 +'
8 !' 6+' 2!+' "59 ' 634+ l' \' + +!' 9 8 l' R " 9'
9+' \' "!' 8 +44 .' 89 +1' "!' 8 .' 634+' R 4A' 8'
248' 44 l' T' 3++3' ' 8' 9+' 81 ! ' 92 ' 3+!4 +8'
9 8' 25 ' 2 3' 1+!D23+8' 9+8+' @"!38' 92 ' 928' 3" +'
B"!+' "!' +3 52 " ' ' 5" 42 3' 92 ' 2 6' 81+5 24'
859+B+' " ' !+"!.2 I2 " ' " ' 859""4 "!' D+!8 6'
+259 .' @ 9' @9 59' 592 2 l8' 2B+' B26' 7+'
288"5 2 +3 ' ' 8' ! +' 92 ' 9+' !2 842 +3' E'
25!+l8' 2 ' .!2B B2!' 2 3' @28' " +' " ' 9+' "BC
B 88 " +!8' 211" +3' "' 1!+12!+' 2' 142 ' "!' 9+'
!+5" 8 ! 5 " ' " ' ' 3!+@8' D+!8 6' +'
@28' 248"' 8 ! B+ 24' ' 8+5 ! .' 8+D+!24' 7+ +C
8' "!' 428."@' D+!8 6' 7 ' 9 8' + 3 ! .'
@"! 9' 28' 2 ' +3 52 " 8 ' 2 +!' 244' 4 +8' ' 9+'
81 !2 7 ' @9 59' 9+' .2D+' "' 5" 89' 6" 9' 2 3'
' 1!+8+ .' "' 9+B' 2 ' 3+24' ' 9+' @"!43' " '
4 +!2 !+' 2 3' 4+2! .' @9 59' ' 928' 7++ ' 9+ !'
2 B' "' !+24 I+' ' 5

+ +!+ 5+8C ?
/ # .= '4= + % % + ' 6= / "
( ) ' ,= D 7 ' = 1' /) ' ' '
(" % +# ; ' < '
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1) ' = (' = ' (' ,≡ =' (' 7 '
-)% " =?% % % +# . ' < > = +% + =
!+' &&!) ' (' (' 7 ' -)% " +% + =
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I ".// . +/ ±" 4 / % 67 7 ' -)% 1' 7 !"
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0!) = ' J = / = ' (' % ' '% 1 =
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2A .)

' 3 (? ' 9+' !8 ' +259+!'
" ' 9+' !8 ' 2 ' 859""4 ' !+2 ' ! 2 ' 4C
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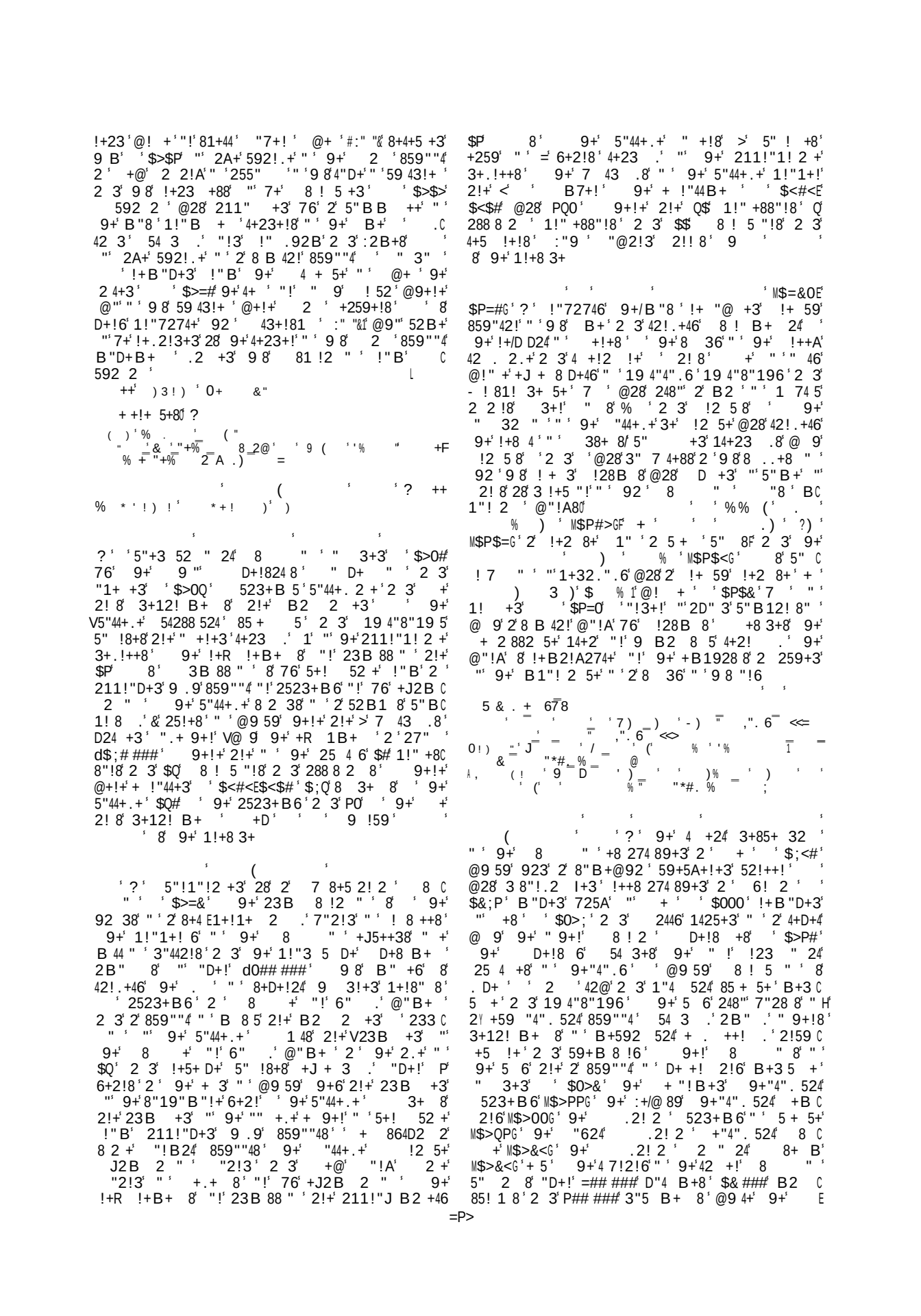

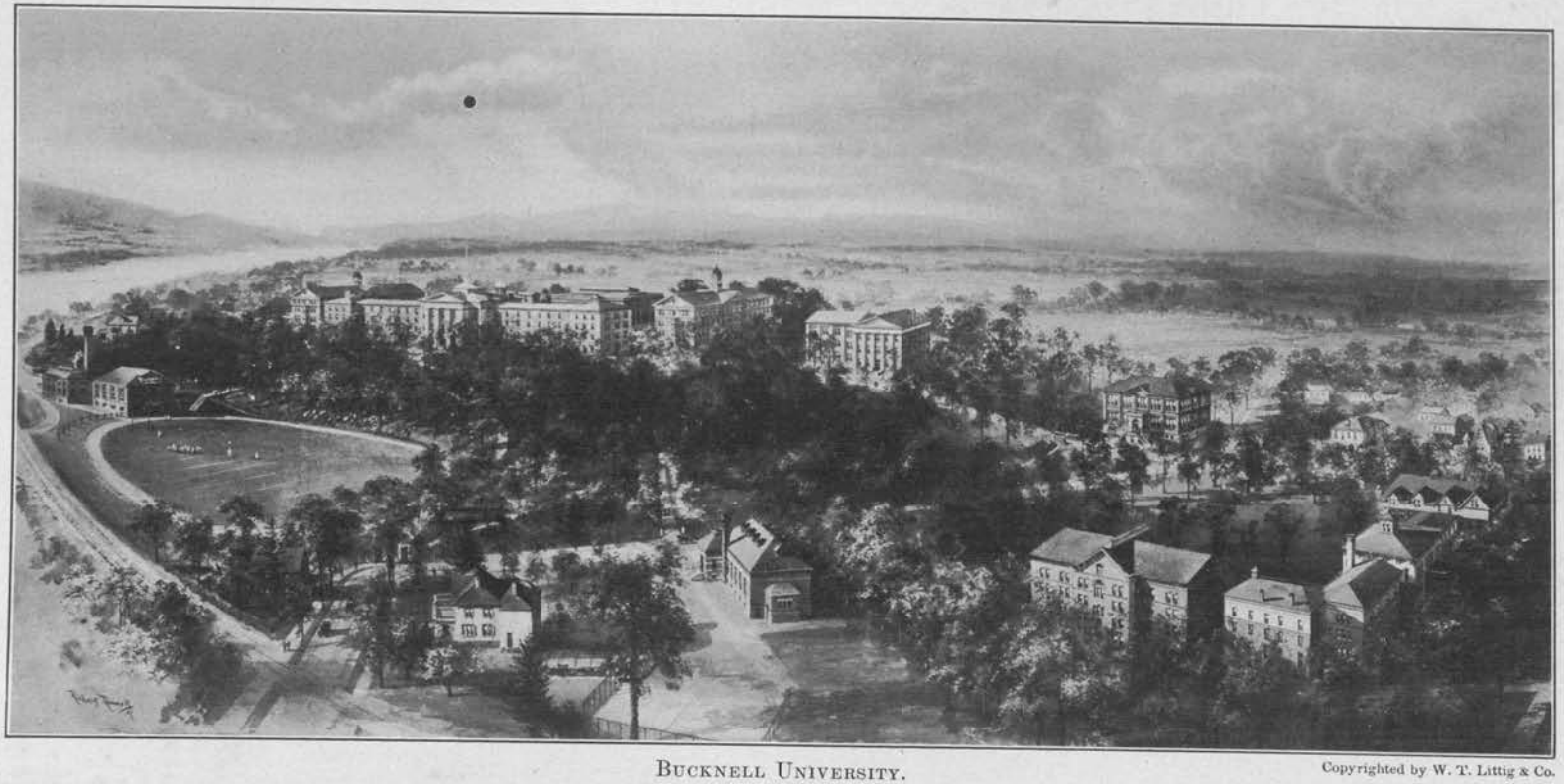

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D+!8 6 4 7!2!6 +8 274 89+3 $&;P 5" 2 8 QOP ### D"4 B+8 2 3 "D+! Q### B2 85! 1 8 9+ 2 24 7 3.+ 2B" 8 "27" dP## ### 924 "@9 59 8 B 8 211!"1! 2 +3 76 9+."D+! E /B+ 7" 0### 8 3+ 8 2 3 0<& 2 3 "!8 @+!+ 2 + 32 5+" 9+ D+!8 6 3 ! . 9+ @ +! 8+B+8 +! "$<#<E$<$# ++ *" !5 *) ! *+!)

(?9+@"!3 S 3392 T B+2 8 S 9+ 4.9 + +3 + T 2 3 @28 8+3 2 5 + 3 2 28 2 !+4 . " 8 4+ 339 8 8 5244 2 3392 9 B @9" 928 8"4D+3 9+!"74+B " +J 8 + 5+ @9" A "@8 2 3 1!+259+8 9+ ! 9 2 3 9+!+76 7+5"B+8 9+ +259+! 2 3 9+ 82D "! " B2 A 3 2D0 .2 2 +3 9+ 9.9+8 ."24 " 4 + !D2 2 9+ 8 " 4" .+! 7"! 2.2 2 3 9 8 3+2 9 8 5244+3 2 24 + !6 " !D2 2 4+2D .7+9 3 " 9 .B"! 24 " 2 5" +3 7"3 46 +J 8 + 5+

55"!3 ." 9+8 2 +B+ 8 9+ 339 8 25!+3 ""A8 33928 211+2! !"B B+ " B+2 3 9+ !3"5 ! 4" ! 89+8 "! 2 5+! 2 1+! "3 7 @9+ 8 4.9 928 7++ 3 B B+3 2 +@ 3392 ! 8+8 @9" 1!+259+8 9+ 8+4 E82B+ + +! 24 ! 9 92 8 7! + 46 "!B 42 +3 9+ 92B B21232 9 80 S " " 3" @!" .7 " 3" ."" 3 2 3 " A++1 9+ 9+2! 1 !+ 92 8 9+!+4 ." "244 33928 T

9+!+ 8 7 " + 9 8 "! 524 3392 9+ " 3+!" 339 8B 28 "@+J 8 8 !B2 +64" 2B 7+ 9 2 2 3 :212 8 2B+ 8 3392! 92 2 2B2 " 9+ 92A62 ! 7+ 2 8" " 9 339"392 2 2 3 9 8@ + 262 44 1!+D " 8 33928 2!+ 4+.+ 32!6 928 7++ 5245 42 +3 92 2 2B2 @28 7"! &QQ 2 2 +3 " 33929"" 3 P>> 2 3 3 +3 38 +.9 + 9 6+2! P=;. + 339 8 59!" "4".6 5" 8 9+ 6+2!8 2 +! 9+ 30 392L8 !D2 2 P=;. +

+4 ." 8 I+24 928 8" "D+!42 3 3392L8 4 + @ 9 4+.+ 3 92 !" +88"!" 48" " J "!3 2 3 42 +!" " + 2! " 3 8 5 + 2!. B+ "!" 9+ 9+"!6 92 3392! 92 2 2B2 923 +D+!" +J 8 +3 2 3 92 3392L8 4 + @28 "! . 0 2446 2 8"42!" B6 9 9 8 961" 9+8 8 928 +D+!" 7++ 2A+ D+!6 8+! " 846 76 859"42!8 2 3 9+ !+4 27 4 6 " 339 8 !23 " 4+2D ." " 9+ "7D " 8 255!+ " 8 " B6 98 928 !2 9+!" 7++ 8 !+ .9+ +3 @ 9 5!+28 ." "!B2 " 9!" .9 9+ 3 85"D+!6 " 2 5 + B" B+ 8 !+4 58 2 3 85! 1 " 8

9+ 92A62 5" 8 +3 2 8B244 !+1 74 52 8 2 +" 3"E 5;3 9 2 8 @9" 923 8+ 4+3 2 9+ "" " 9+ +124+8+ B24262 9 339"392 2 211+2!8 "92D+ 7++ 2 @+24 96 2 3 1"@+! 4 "74+B2 2 59 + "!+D+ !2-29 " 9+ 2 2B2 542 2 3 3392! 92 + -"6+3 2 ."" 3 +3 52 " + @28 B2!! +3 " 9 8 5" 8 289"E 392!2 " "4 @9" 7"!+ 9 B 2 8" @9"B 9+6 2B+3 29 42 " " C + +! T 7+52 8+ 9+ 59 43 @28 4 A+46 " 8+!D+ 28 2 + @9 59 @" 43 7 3 3392! 92 " 9+@"!4346 +!+8 8 " 4 + 3392! 92 @28 " 2 !+4 ." 8 ! " B 3

2 3 M28 !23 " B"8 3!2B2 52446 +448G 92D .7+9+43 9+8.9 " 9+ 9!++ 8 " 4 + " @9 59 244 4+89 8 9+ ! ? 3 8+28+ "43 2.+ 2 3 3+2 9 ? 9+4+ 9 8 5"B "! 274+ 9"B+ 2 3 !+ " 5+3 9+ @"!43 + !8 8" .9 824D2)E " 9+ @268 " !29B2 19 4"8"196 2 3 285+ 5 8B 9+ !+-+5 +3 9+ !23 " 24 3"5 ! +8 9+ 2 9"! 6 " 9+ (+328 2 3 9+ B+2 8 " 824D2 " 76 1!26+! 2 3 825! 5+ 2 3 " 3+3 2 859""4 " 9 8 "@ @9 59 !21 346 3+D+4"1+3 "2 1"@+! 4 !+4 . " 8 B"D+B+ 3 8 . 89+3 76 9+!2!+5"B 7 2 " " 19 4")8"19 524 3+1 9 2 3 2 1"1 42! B"3+" 1!+8+ C 2 "

9+52 " 524 7""A8 " 339 8B 2!+@! + 24 2 42 . 2.+ @9 59 7+2!8 9+ 82B+ !+42C " 9+ "43+! 2 8A! 92 24 2 7+2!8 " 2 "@+D+! 3 ! .9+ !8 5+ !6 " 9+ 9! 8 2 +!2 2 2 B+ @9+ 339 8B 7+.2 " 288 B 42 +8"B+ " 9+ B"8 1"1 42! !) " 8 " 9+ 128 2 8A! 52B+ " D". +2.2 2 3 24B"8 8 B 4 2 +" 846 2 3 8C 5 " @28 B23+ 7+ @++ 9 8 +@ 9+ 7!"23+! 2 3 B"!+ 1"1 42! 59 !59 9+ 292E 62 2 " " 9+ S 42!.+ D+88+4 T MD I " 824D2 " G 2 3 9+ "43+! 2 3 B"!+ 2 8 +!+ 859""4 "@ 5244+3 262 2 M"! S 8B244 D+88+4TG 9 8 - 5 !+ 339 8B 81!+23 "D+! 7+ 9 2 2 3 :212 2 3 8" 9211+ +3 92 "! 9+! 339 8B 9+ +!B8 2 3 2B+8 288 B+ 9+ 2 8A! "!B @9 4+ " 9+! 339 8B 9+ "! . 24 24 1!+D2 48

55"!3 ." 9+3 24 8 5 " " 8" 2 5 + 3 2 244 B2 +! 24 +J 8 + 5+ @28 3++B+3 +D 4 2 3 9+8" 4 5244+3 1 "!8+4 @28 8 11"8+3 " 7+ 2 7+ .76 8+4 ++146 !+4 . " 8 1+"14+ 9+!+ "!+ 8" .9 824D2 " 9!" .9 8+4 EB"! C 52 " @9 59 89" 43 8+!D+ 28 2 B+2 8 "! 9+ 4 7+!2 " " 9+ 8" 4 !"B 9+ 7"36 2 3 "! 9+ 2 2 B+ " " !D2 2 9+ 8 2 +" 1+! +5 81 ! 24 74 88

!D2 2 8 592!25 +! I+3 28 2 8 2 +" 1+! +5 1+25+ @9+!+ 9+!+ 8 " 12 " 8"!!"@ "! B+ .3+8 !+8 "!@2 8 2 3 9 8 @28 " 7+ 2 2 +3 76 +J . 89 ." !74"@ . " 9+ 2B+ " 1288 " ?9+ 5+ 9+ 2B+ "! M 24 .. & B+2 8 S +J 5C " T

B" .9+ +8 +! 1+"14+ 9+ " 1!+C D2 48 92 !D2 2 B+2 8 S 2 9 42 " T 2 3 9 8 D +@ @28 "! . 2446 9+43 248" 76 !" +88"! 2J 44+! 4 9+ D+8 .2 +3 9+ R +8 2 3 8+ 4+3 76 5"44+5 .244 9+ 12882.+8 9+ 339 8 7""A8 @9 59 !+ +! " !D2 2 @9+ 9+ 3 85"D+!+3 " 9 8 "@ 28 " 89B+ 92 9+!+ @28 " " +12882.+ @9 59 3+85! 7+3 9 8 8 2 +" 9 .9+8 74 88 !D2 2 28 2 9C 42 " 8 7""A " 9+ 8 7-+5 + 4+3 M !8 +3 " $>&<G 89" 43 92D+ 1 2 + 3 " 9+ 3 81 +2 3 6+ +D+ 8 59 859"42!8 28 43+ 7+!.2!+ " 3 19"43 .9+ "43 D +@ 9+ 3 5 4 6 4 +8 9+ 27 4 6 " 8"B+ 1+"14+ " 5"B1!+9+ 3 9+ 8 . 52 5+ " 339 8 19 4"8"196 2 3 18659"4".6 339 8 8 3 8 . 89 7+ @++ @" 8 2 +80

=P<

+J5+1 ' 92 ' " ' 2' +259+!' 2 3' 23D 8+!' S' +' 6+' 42B18' "' 6" !8+4D+8 T' 9+' 82 3' ' 9 8' 2!)' @+44' 233!+88' "' 9 8' 3 85 14+8' M;G' +' @28' 54+2!' ' 9 8' 8 2 +B+ 8' 2 3' 1!25 5+3' 9+' B+ 9"3' "' + B+!2 .' 9+' 8+D+!24' 1" 8' 9+' @2 +3' "' B1!+88' " ' 9 8' "44"@+!8' M=G' +' 44 8 !2 +3' 9 8' 3"5 ! +8' 76' 244+."! +8' 12!274+8' 2 3' 8 "! +8' MPG' 9" .9' 9+' !+-+5 +3' 9+' !29C B2 ' 3"5 ! +8' M7+4 + ' ' 9+' (+328' 28' 81 !+3' 7""A8' 9+' !29B2 ' ! 24' 825! 5+' 1!26+!' 2 3' 9+' 528 +' 868 +BG' 9+' 3 3' " ' 2 2." !+' + 9+!' !29B2 8B' "!' 2 6' " 9+!' !+4 ." ' +! 2 ' 5! 5 8B8' " ' !29B2 8B' 92D+' 7++ ' 2 ! 7 +3' "' 3392' " +' '@9 59' 9+' !29C B2 8' 2!+' 5"B12!+3' "' 2' 8 ! .' " ' 74 3' B+ ' M " ' 4 A+' 9! 8 L8' 12!274+' " ' 74 3' 4+23+!8' " ' 9+' 74 3G' 2 3' 2 " 9+!' ! 3 5 4 .' 9+' 1!+ + C 8 " 8' " ' 9+' ."3' !29B2' "' "B 85 + 5+' 2 3' "BC 1" + 5+' 7 ' +D+ ' 9+8+' 2!+' B"!+' 9 B"!" 8' 92 ' 82 ! 524' MOG' 3392' 1" 8' " ' +!!"!' 2 3' 8' 5" 8+R + 5+8 ' 7 ' 9+' 3"+8' " ' 59 3+' "!' 3"+8' 9+' 288 B+' 9+' 2 9"! 6' " ' 2' "!3 ' ' 9 8' 8+ 8+' +D+ ' 9+' 5"3+' " ' B"!24' 1!+5+1 8' 2!+' " ' 5244+3' 9+' + ' 5"B B2 3B+ 8' 7 ' S' 2D" 3C .' 9+' + ' +D 48 T' M>G' +' 9! 44+3' 9 8' 9+2!+!8' 76' 1" .' " ' 9+' 74+88+3 +88' 9+' 7+2 6' 2 3' 9+' .4"!6' " ' 9 8' + 9 58' +' 5244+3' 9 8' !+4 . " ' 9+' S' .4"! " 8' 3"5 ! +' T' M2 ' 2 24".6' "' 9+' 9! 8 2 ' S' ."81+4' T G' M<G' +' 1!+8+ +3' 9+' ! 98' 9+' 2 .9 ' ' 1"+ 524' "!B ' @9 59' 233+3' 9+' + 19" 6' " ' 24' D+!8+' "' 2' 5" D 5 .' 211+24' "' ! 9 9+' B2 6' 8 ! A .' 8 B 42! +8' 7+ @++ ' 339 8B' 2 3' 9! 8 2 6' 8 ..+8' 9 8 "! 524' 5" +5 " 8' 7 ' 9+' 4 + 5+' " ' 339 8B' " ' 9! 8 2 6' B 8' 92D+' 7++ ' 3 !+5 F 9+!+' @28' "' 3 !+5' 7"!!"@ .' ' 9+' " 9+!' 92 3' 9+' 4 + 5+' " ' 9+' 9! 8 2 ' +8 "! 2 8' " ' 9+' "!B2 " ' " ' 2B2 8B' M 9+' 9 +!2!59 5' 339 8B' " ' 7+ G' 8' 3+ 274+' ' B"8' 5 ! " 8' 5" 5 3+ 5+' 8' 9+' 255 3+ 24' 8 B 42! 6' ' 8" 3' " ' 2B+8' 8 59' 28' 2! 2' ? ' 262' :"92 +8' ?' 2 32' + !"8' ?' 92! 1 !2' : C 328' ?' +D232 2' + 5 9+'4 +!2 !+' " ' 339 8B' 8'D+!6'+J + 8 D+' 9+'2 5 + ' 52 " 524' 7""A8' 2!+' 5"44+5 +3' ' 2' 4 7!2!6' 5244+3' 0 A 1' 9+' S' 9!++' 728A+ 8 T' 5" 8 8 .' " ' 9+' + 'M3"5 ! +G' 9+' ' M1!+5+1 8' 2 3' ! 4+8G' 2 3' 9+' . ' M19 4"8"196G

9+' 7+8' A "@ ' 2 3' B"8' 592!25 +! 8 5' 7""A8' " ' 9+' 339 8' 52 " ' 2!+' 9+' + ' 1' 2' 7""A' " ' 8 2 !28' !+4 . " 8' 1"+B8' " ' 3++1' +2! +8 +88F 9+' ') ' 1' 2' 5"44+5C " ' " ' 3 85" !8+8F 9+' + ; ; $ ' ') 1' "!' 9+' 2) ' (' ' 8 ' (') 1' 2 3' 9+' . . ' ') 1' 2' 8 "!6' " ' 9+' 428 ' 3268' " ' 3392 \ r ! 9+!' 9+!+' 2!+' 8+D+!24' 7 ".!219 +8' 9+' -) % ' 8' 2' 4 +' " ' 3392' 76' 89E D2.9"892' " 9+!' 4 +' " ' 3392' ' 9+' "! . 24' 2 8A! ' 928' 7++ ' 4"8 ' 7 ' +J 8 8' 8 44' ' 2' 9 +8+' !2 842 " ' 3+!' 9+' 4+' 2 ' ' ' / ' 0 ' 8 " 9+'7+8 ' A "@ ' " ' 9+' 42 +!' 7 ".!219 +8' 2 3' 9+' B"8' 2 28 5' 8 "!6' "

3392L8' 4 +' 8' 9+' ' " 9+' A ; 1' "!' S' 7 ! 98 "! +8 T' 5" 2 ' 9+' "4A4"!+' " ' 339 8B' 9+6' 2!+' 1"1 42!' 24+8' @ 9' 2' B"!24' L'

+ +!+ 5+80' ?

.) & ' ' ' (' " M " 3" ' $>>QG -) " M 2 ."" G !.1" ' ' + " M 1+ ' " ! ' 9 52." ' $<#0G 0 ' 7 ' (' -) " &!77.' :' ') ' G) " M "8C " ' $><0G !1 " ' ' ' % " ' -) 1' 9 ' / ' ') " M +@' "!A ' $><&G -) ' - ' ' " M " 3" ' $><<G) ..5, && ! ' " ' 0 .') ' -) ' ' 9 ' % ' ! ' - " M " 3" ' $>>>G *&& . ' ' !<' -) ' " M " 3" ' $>&<G &) . .C' -) 1' ' ' . 1' ' ' 1' %" M +!4 ' $><0' ;3' +3G' ! ' 76' ' "+6 ' M " C 3" ' $>>QG 24' +J ' "5 + 6' $). % I +3 ' 76' ' ' 968' 2D 38' M " 3" G 0.)!. ') ' ' ' -) " M 2! 8 ' $>>QG 0 ' . 'A) " M 245 2G 0 ' -) " M " 3" G , !...) ' -) 1' 9 ' 0 " M 2B7! 3.+' 288 ' $><&G

: ' ?' ++' * W * "

' ' ?' 2 " 24' ?' 9+'425A' " ' 2 6' 2 " 24' +3 52 " 24' 142 ' 2 3' 9+' 278+ 5+' " ' 2 6' 3 !+5 ' +3+!24' 5" !"4' " ' "!C .2 !+3' 1 74 5' +3 52 " ' ' 9+' +3' 2 +8' 8+!D+8' "' !+3 5+' +3 52 " ' "' 2' 1"8 " ' " ' D+!6' B "!' B1"! 2 5+' 28' 2' 25 "!' ' 9+' +3+!24' 7 3.+ ' +D+! 9+4+88' +259' " ' 9+' +J+5 D+' 3+12! B+ 8' " ' 9+' 2 " 24' ."D+! B+ ' 3 !+5 8' 2 3' 52!! +8' " ' + +!1! 8+8' " ' 2 ' +3 52 " 24' "!' R 28 E+3 52 " 24' 592!25 +!' 9+' +J1+ 3 !+8' "!' @9 59' 2!+' 2 9"! I+3' 2 3' 211!"D+3' 76' " .!+88' " 8+R + 46' @9 4+' 9+' 2 24' 2B" ' " ' 8 59' +J1+ 3 !+8' 8' 8 . 52 ' ' 5"B12! 8" '@ 9' 9+' " 24' 2 " 24' " 426' "!' 244' 1 !1"8+8' ' 3"+8' 5" 2 ' +B8' " ' 8 . 24' B1"! 2 5+' "' 9+' +3 52 " 24' @+4 2!+' " ' 9+' 2 " ' 9+' 211!"1! 2 " 8' " ' 9+' J + 9' " .!+88' M$<#0G' 7+924' " ' +3 52 " ' B26' 7+' 5 +3' 28' 61 524' " ' 9+' +J 8 .' 852' 1"8 " ' " ' +3 52 " ' 28' 2' +3+!24' 3+! 2A .' 9+' " 24' 288+B74+3' !"B' 9+' 8+D+!24' 3+12! B+ 24' 7 3.+ 8' 2B" +3' "' B"!+' 92 ' " ! ++ ' 2 3' " +' 924' B 44 " 8' " ' 3"442!8' 9 8' 54 3+3' 38' "!' 9+' 1 74 5' 859""48' " ' 9+' 8 ! 5 ' " ' "4 B7 2' 9+' B 98" 2 ' 8 " ' 9+' 7!2!6' " ' " .!+88' +! 2 " 24' 85 + 5' 5" .!+88+8' B 4 2!6' 2 3' 2D24' 2523+B +8' 2 3' !2 .' 8 " 8' 3 2 ' +3 52 " ' !+2 ' " ' 3 52 " ' 2 3' 9+' 5" .' 211!"1! 2C " 8' "!' 5"44+.+8' " ' 2.! 5 4 !+' 2 3' B+592 5' 2! 8' J5+1 .' 9+' 428 E 2B+3' +B ' 9+' 211!"1! 2 " 8' @+!+' '+D+!6' 528+' "!' 9+' 7+ + ' " ' 81+5 24' 8 " 8' 2 3' "!' +J !2"!3 2!6' 1 !1"8+8' 92D .' 4 4+' "!' "' !+42 " ' "' 9+' .+ +!24' 868 +B' " ' 1 74 5' 859""48' B+!" 8' 1!"1"8248' 92D+' 7++ ' B23+' ' " .!+88' "!' 9+' + 42!.+B+ ' " ' 9+' 819+!+' " ' +3+!24' 4 + 5+

9!" .9 211!"1! 2 " 8 " 9+ 8+D+!2 8 2 +8 "! D2! " 8 .+ +!2 +3 52 " 2 1 !1"8+8 9+ B"8 8 . 52 " @9 59 92D+ 7++ 9"8+ 1!"D 3 . "! 2 " 2 211!"qG! 2 " 8 2 3 " +4+B+ C 2!6 2 3 8+5" 32!6 3 8 ! 2 2 3 5"B B+!5 2 859""48 4 9"@+D+! 9+!+ 8 2 B"!+4". 52 "!.2 I2 " " 9+ +3 52 " 2 25 D +8 52!! +3 " 3+! 2 " 2 2 81 5+8 9+ B1"! 2 5+ " +3 52 " 9+ +3+!2 7 3.+ @ 4 7+ 5+! 2 2 3 D2!6 . M ++ 9 = = %

2 + ? 9+ 8522 23B 8 !2 " " 1 74 5 +3 52 " 9+ 3 +!+ 8 2 +8 " 9+ " 1!+8+ 8 9+ .!+2 +8 3 D+!8 6 !25 52446 81+2A . +4+B+ 2!6 2 3 8+5" 32!6 859""48 !+5+ D+ 9+ ! B2-"!8 11"! !"B 4"52 2J2 " 8 114+B+ +3 76 2 2 2 211"! " B+ !"B 9+ 5"B+ " 1+!B2 + 8 2 + 38 +8 274 89+3 "! 859""48 76 .+ +!2 8 2 + 2J+8 2 3 76 D2! " 8 81+5 2 2 38 M ++ 2! 54+8 " 9 # $ .9+! 2 3 1!" +88 " 2 8 " 8 2 3 859""48 "! 81+5 2 54288+8 7+ . 23B 8 +!+3 3 !+5 46 76 8 2 + 7"2!38 2 3 " 5+!8 2!+ 3+1+ 3+ + !36 1" 9+ 8 2 + 28 2 8 11"! . B (+!6 !+R + 46 9+ 8 2 + 5" 8 " !+ 3+!8 B2 C 32 "!6 1" 9+ 4+. 842 !+ " B2 2 9+8+ 8 " 8 9+6 2!+ 9+!+ "!+ " 5" 8 3+!C 274+ B1"! 2 5+ .+ +!2 4 8 2 + 2 5+ @" .+ +!2 1"4 5 +8 2!+ " 7+ "78+!D+3 @ 9 !+ +!+ 5+ " 9+ "!3 2!6 8 11"! " 81+5 2 8 2 + 3 52 " 2 8 " 8 3+! 9+ !8 2 B"!+ "! 4+88 8 274+ 2B " " 8 11"! 8 .!2 +3 " +259 9!" .9 + 9+! 5" . 211!"1! 2 " 8 "! 81+5 +3 8 2 + 2J+8 8 61 52 " 9+ 1! 5 12 3 +!+ 7 3.+ 2!6 B+ 9"38 @9+!+76 2 J+3 1"! " " 8 11"! 8 2 +B1 +3 B26 7+ 5 +3 8 59 8 2 5+8 28 9+ 81+5 2 8 2 + 2J+8 4+D +3 24 "! 2 "4"!23" 3 2 2 "@2 + 5A6 59 .2 +8" 2 +7!28A2 9 " 2 3 85" 8 "! 9+ D+!8 6 2.! 5 4 !2 5"44+.+8 "!B2 8593"48 + 5 F 9+ 81+5 2 8 2 + 2J M" + B 44 "! 9 2A" 2 M211"! " +3 28 "44"@8 " " + 9 3!+3 98 " 2 B 44 " 9+ 8 2 + D+!8 6 2 3 859""4 " B +8 ! 4 " + 9 3!+3 98 " 2 B 44 " 9+ 2.! 5 4 !2 5"44+.+ ((" + 9 3!+3 98 " 2 B 44 " " + 8 2 + "!B2 859""4 2 3 " 2 " 9+! 6 " + 9 3!+3 98 " 2 B 44 " 9+ 8 2 + 859""4 "! 9+ 3+2 ! " + 9 3!+3 98 " 2 B 44 " 9+ 8 2 + 859""4 "(1( ) " + 9 3!+3 98 " 2 B 44 " 9+ 2523+B6 " 85 + 5+ " + 9 C 3!+3 98 " 2 B 44 " 8 2 + 3 8 ! 2 859""4GF 2 3 9+ .+ +!2 +3 52 " 3 + +88++ 5" C 8 8 . " QP 1+! 5+ " 9+ .!"88 !+D+ + " 9+ 8 2 + M&$ 1+! 5+ "! .+ +!2 211"! " B+ " 4"52 5"B B +8 "!+4+B+ 2!6 2 3 8+5" 32!6 +3 52 " F $# 1+! 5+ "! 81+5 2 211"! " B+ " 4"52 5"B B +8F > 1+! 5+ "! 81+5 2 2 3 " 5" 6 9 .9 859""48F $ 1+! 5+ "! 859""4 4 7!2! +8 $; 1+! 5+ "! 8 2 + "!B2 859""48F 2 3 0 1+! 5+ "! 9+ D+!8 6G 9+8+ J+3 38 2!+ 8 2446 2 .B+ +3 9!" .9 211!"1! 2 " 8 "! 7 43C . 2 3 8 3!6 81+5 2 1 !1"8+8 2 +259 4+) E 42 D+ 8+88 " 3+! 9+ 8+5" 3 2 3 B"!+ @ 3+46 23"1 +3 1"4 56 9+ !+81" 8 7 4 6 " 1!"D 3 . "! 9+ 8 11"! H" 9+ 8+D+!2 8 2 + +3 52 " 2 8 C " 8 2 3 +!+8 8 8 5"B B +3 " +259 2 2 "! 7 + 2 4+. 842 D+ 8+88 " 1!25 52446 +D+!6 8 2 5+ 5" !"44 . 7"2!38 2 3 " 5+!8 2!+ !+R !+3 " 1!+8+ 2 +259 2 5 2 1+! "3 M2 2 7 + 246 1!"1+! !+1"! 8 5" 2 . 2B" . " 9+! 9 .8 2 255" B " 852 "1+!2 " 8 9+8+ 1 7C 4 89+3 !+1"! 8 7+5"B+ 9+ B+3 B " 3 !+5 5"B B 52 " 7+ @++ 8 " 8 2 3 4+. 8C 42 !+ 9+"!+ 52446 9+6 2!+ 9+ 728 8 "! 9+ 4+. 842 D+ 3+ +!B 2 " !+.2!3 . 8 1C 1"! " ! 9+ +J 852 1+! "3 !25 52446 9"@+D+! 9+ ++38 2 3 542 B8 " 9+ 8 C " 8 2!+ 1!+8+ +3 76 9+ ! " 5+!8 3 !+5 46 "! 3 !+5 46 9!" .9 81+5 2 5"B B ++8 " 9+ 4+. 842 !+ " 9+ 4+. 842 D+ 7 3.+ 5"B B ++ M5"B B ++ " 2 5+ 5"B B ++ " 542 B8G @9 59 8 3+! 9+ +5+88 6 " 23- 8 . 9+ " 2 " 211!"1! 2 " 8 " 8+ B2 +3 !+DC + +8 9 4+ 9 8 8+5" 3 1"4 56 8 9+ B"!+ 4+J 74+ 2 3 + 274+8 9+ !+23 +! 2321 2 " " 2 5 2 B+2 8 " +3 52 " 2 ++38 C 3" 7 +346 4+238 " 5"B 1+ " 2B" . 8 C " 8 "! 2 5 2 1!+ +!B+ 2 3 !+R + 46 1+!B 8 9+ 825! 5+" +3 52 " 9+ +!+8 8 " 12! 6 +J1+3 + 56 9+ 5" +B1"!2!6 !+ 3 8 "@2!3 9+ !8 1"4 56 " !3+! " 8 !+ " 8 " 8 2 8 11"! 5" 8 8 + @ 9 "!B2 3+D+4"1B+ 2 3 " !+B"D+ 9+ 3+ 2 48 " 9 8 +2 !+ " 1 74 5 2 5+ !"B 9+ 5+! 2 25 " " 1"4 52 "!5+8 9 59+D+! " 9+ "!+." . 1"4 5 +8 28 " "!3 2!6 2 5 2 8 11"! " 81+5 2 3 9 .9+! 8 " 8 8 "44"@+3 @" B+ 9"38 2!+ +BC 14"6+3 "! 9+ .+ +!2 4+. 842 D+ 5" !"4 " +J1+ 3 !+8 6 9+ " + 9+ 4 B " +J1+ C 3 !+ "! +259 1 !1"8+ ? 8242! +8 !+12 !8 4 7!2!6 + 5 ? 8 81+5 52446 3 52 +3F 76 9+ " 9+! " 3+ 2 4+3 1!+85! 1 " 8 2!+ B1"8+3 9+ 3 8 ! 7 " 2 3 +J1+ 3 !+ " 9+ 211!"C 1! 2 " 8 7+ . 4+ " 9+ 3 85!+ " " 9+ 5" !"44 .7"2!38 ! . 2 6 9+ 2 5 2 1"4 56 " 9+ 8 2 +8 "@2!3 9 .9+! 2 3 81+5 2 859""48 @28 " + " 3+5+ !24 I2 " F 92 8 +259 @28 !+2 +3 3+1+ 3+ 46 " 9+ " 9+! 9+ B2!A+3 + 3+ 56 " 9+ 428 3+523+ 928 7++ " 7! . 1 74 5 +J1+ 3 !+8 "! 9+8+ 1 !1"8+8 B"!+ 2 3 B"!+ @ 9 9+ 5" !"4 " 81+5 2 23B C 8 !2 D+ 7"2!38 / 9 8 1!+D+ . " 2 42!.+ 3+.!++ +5+882!6 8 " 2 5"B 1+ " 2 3 3 14 52 " " + "! 2 3 +8 274 89 . 2 728)"! 9+ 7+8 3+D+4"1B+ 8" 2! 28 9 8 3+1+ 3+ 1" 8 11"! 9+ @+44E3+ +3 B"D+B+ "! 9+ B"!+ 9"!" .9 2 3 . " 9+ 2 5+8 " 244 1 74 5 8 " 8 928 248" !"3 5+3 2 25 "! 5245 42 +3 " 1!"3 5+ B"!+ +5" "B 524 2 5 2 23B 8 !2 " !"B 2 8522 1" " D +@ 9+!+42 " " 9+ 8 2 + " 4"52 868 +B8 " +4+B+ 2!6 2 3 8+5E

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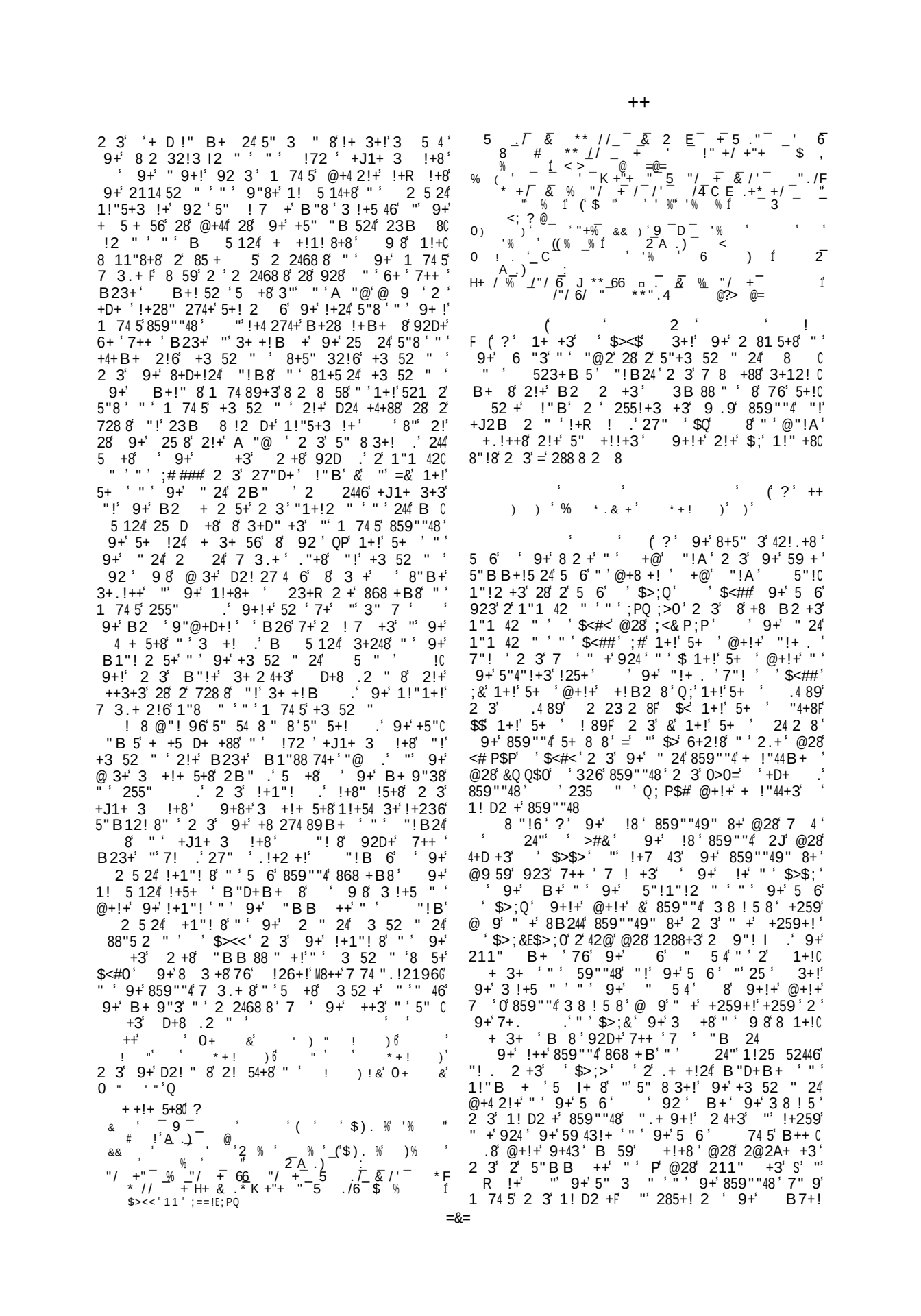

port on its educational, hygienic, and material condition.

The school system consists of 1 city normal training class, 3 high schools, elementary schools, and kindergartens. In 1908–1909 the city employed 79 supervisory officers, 1399 teachers in day schools, and 92 teachers in evening elementary and high schools. A term of 192 days was provided in day schools and 62 evenings in evening schools; 27 kindergarten teachers were employed. The total expense for day schools was $1,537,414. E. P. C.

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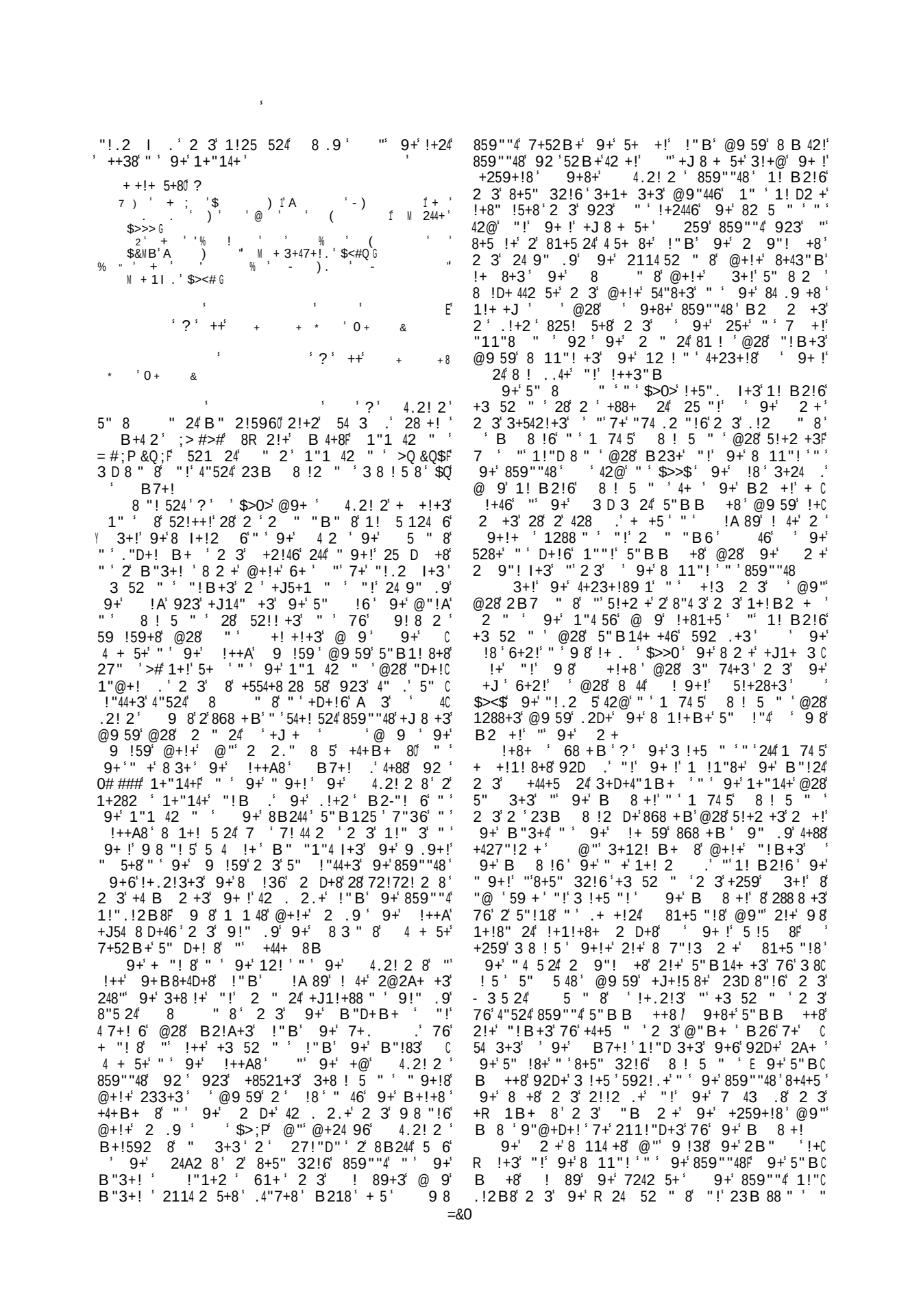
BUFFALO, UNIVERSITY OF, MEDICAL DEPARTMENT, BUFFALO, N.Y. — Opened in 1846. A 4-year medical course is given. Candidates are admitted under the regulations contained in the laws of New York, 1893, and as amended to June 1, 1906, providing for the preliminary education of medical students. There is a faculty of 38 professors and 69 instructors.

BUFORD COLLEGE, NASHVILLE, TENN. — A proprietary institution for the higher culture of young women. Collegiate and fine arts departments and schools of journalism and library training are maintained. There are no definite requirements for admission. Degrees are conferred.

BUGENHAGEN, JOHANNES (1485–1558). — A German reformer and friend of Luther and Melanchthon, called also Dr. Pomeranus. He was born in Wollin, and educated at the University of Greifswald. He entered the priesthood and became at the age of 20 rector of the town school in Treptow, where his excellent humanistic teaching widely attracted attention. He became deeply interested in biblical study and delivered lectures on the various books of the Bible and on the Church Fathers, which were attended by the townspeople and the clergy. Inspired with the zeal of the Reformation through the writings of Luther, he went, in 1521, to Wittenberg, where he soon was appointed professor in the university, as well as pastor of the city church. One of his first actions in this capacity was the restoration of the town school, which had fallen into decay. Bugenhagen's most important activity, however, began when he was called to the north of Germany to establish the Reformation and to regulate the affairs of churches and schools. In 1528 he drew up a church and school constitution for the city of Brunswick, in 1529 for Hamburg, in 1530 for Lübeck, in 1534 for his native Pomerania; and these church constitutions became the models of many others. In 1537 he was called by King Christian III to Denmark, where he was received with great honors and remained until 1539, being occupied with the reorganization of the University of Copenhagen and of the Danish church. The last years of his life were embittered by political and theological strife; he became partially blind, and died at Wittenberg, where he is buried in the city church. Bugenhagen must be considered as one of the foremost men of the German Reformation. His importance for the religious and educational development of the north of Germany is equal to that of Melanchthon for the south. But while Melanchthon's interest was

Johannes Bugenhagen.

chiefly directed toward the higher schools, Bugenhagen's work was especially fruitful in the field of popular elementary education, both for boys and girls. He was the first, not only to insist upon, but actually to introduce, elementary schools in cities and villages in which all children should receive instruction in catechism and in the reading and writing of the mother tongue. Thus he may be called the father of the Protestant *Volksschule*, especially of the rural elementary school. His interest in female education is especially remarkable. He considered the training of mothers the most effective means for the moral elevation of the people. He did, however, a great deal also for higher education, and even planned a system of adult education in the so-called *Lektorien*, a kind of people's universities. In all his work Bugenhagen showed great tact, a genius for



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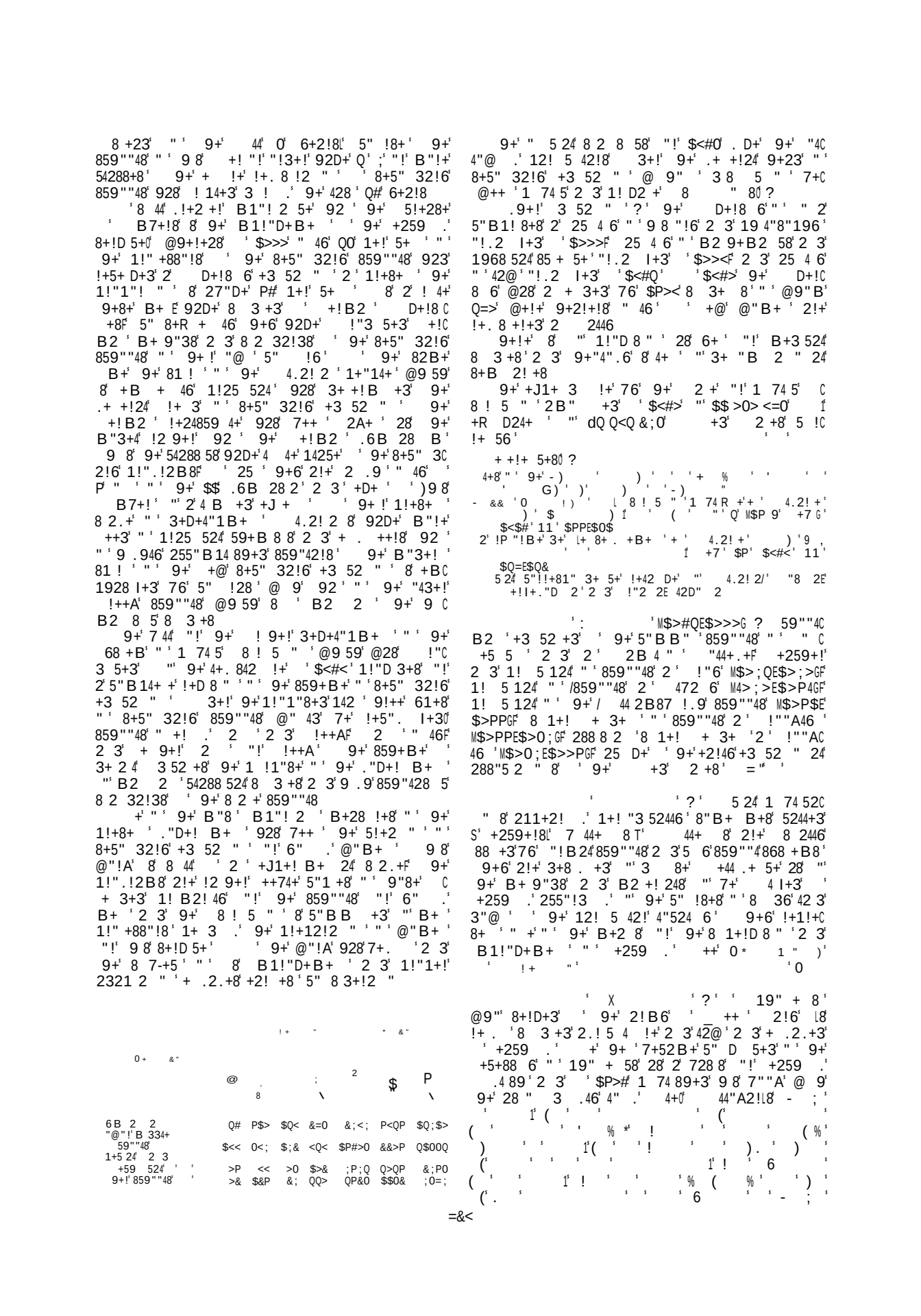

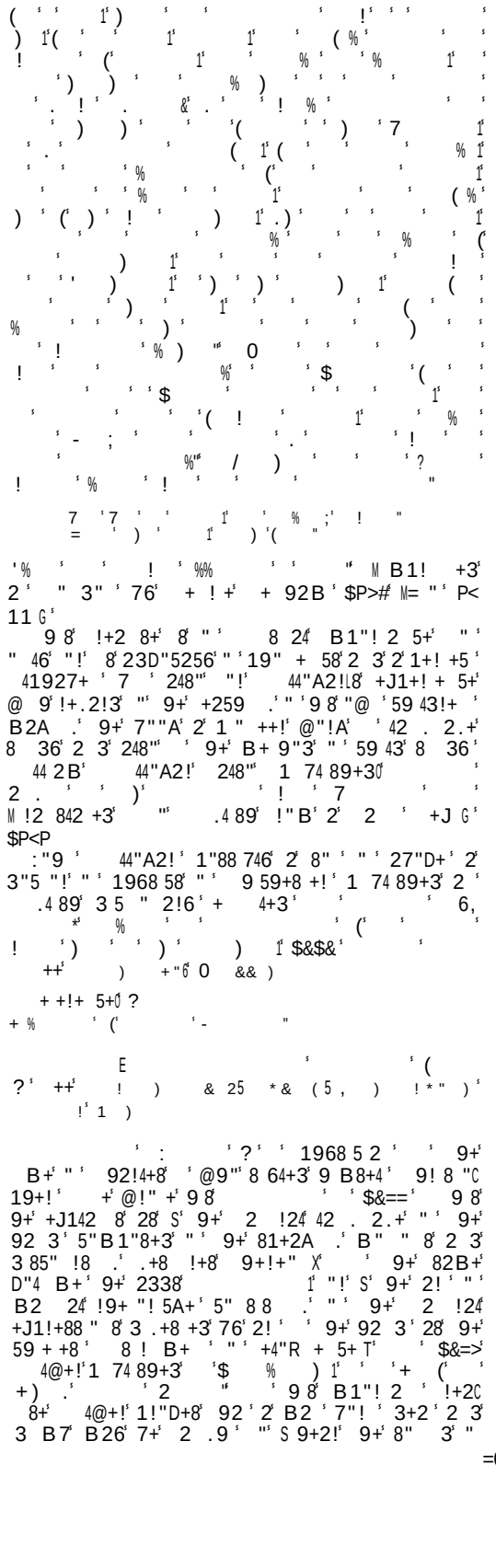

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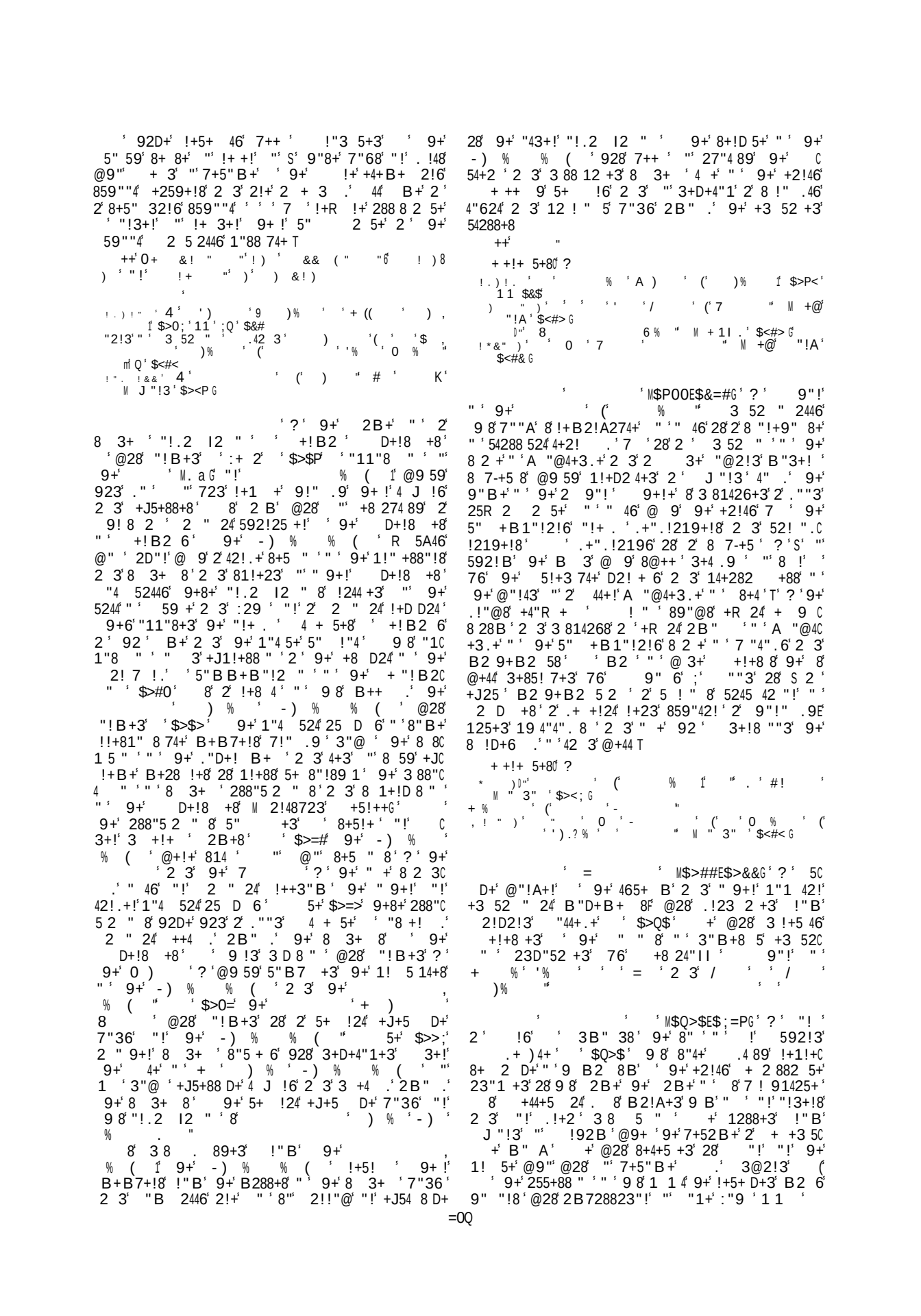

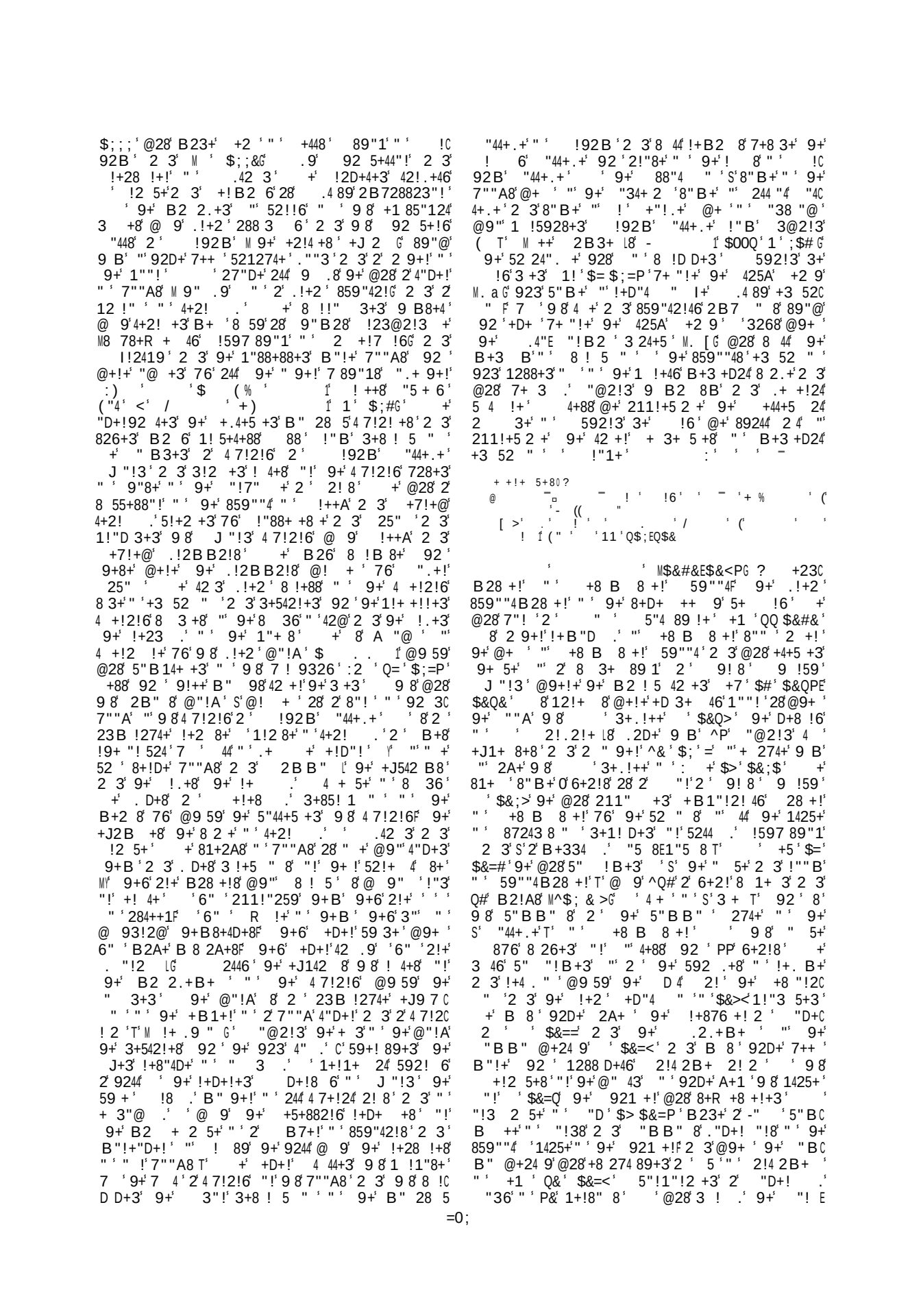

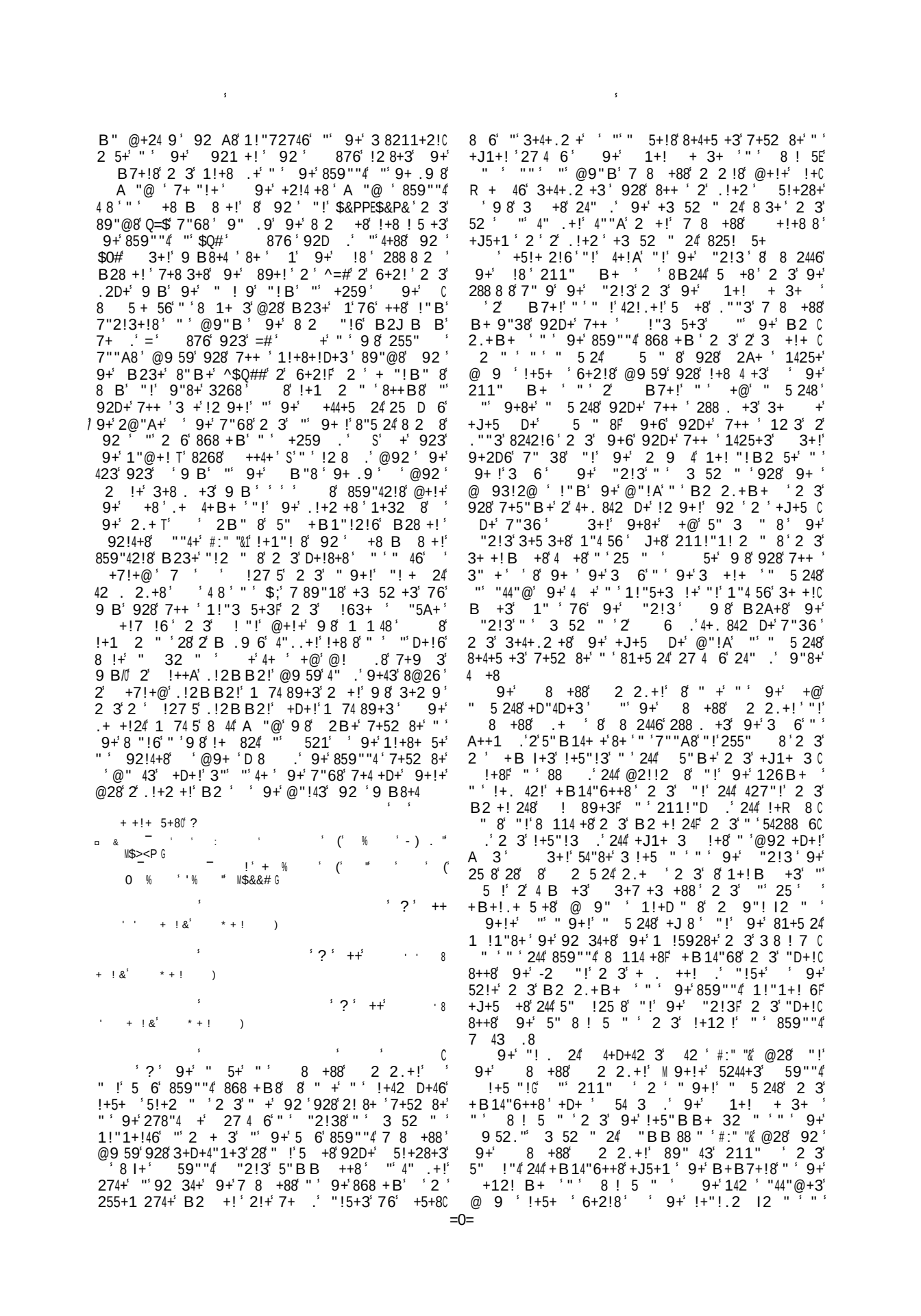

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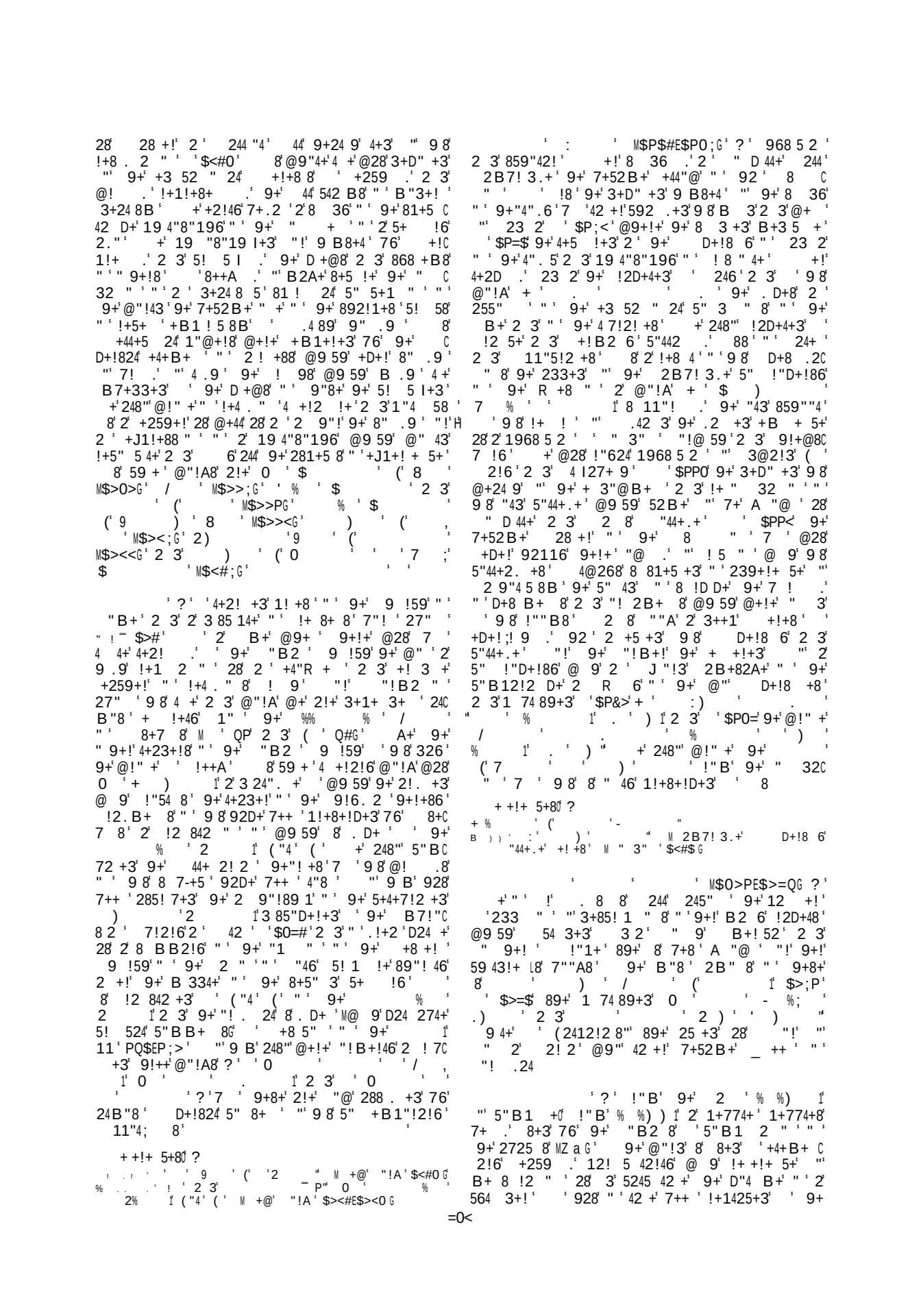
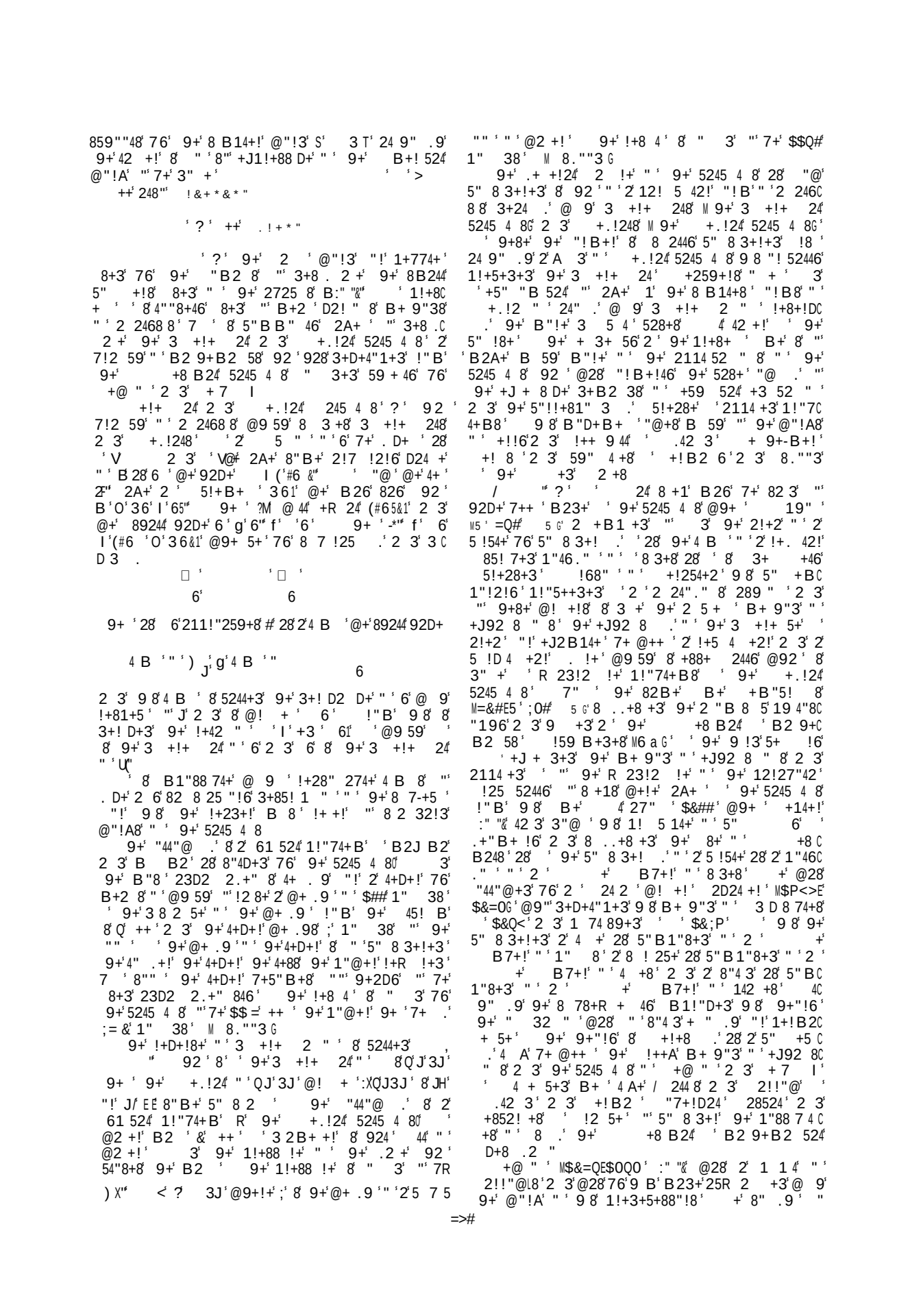
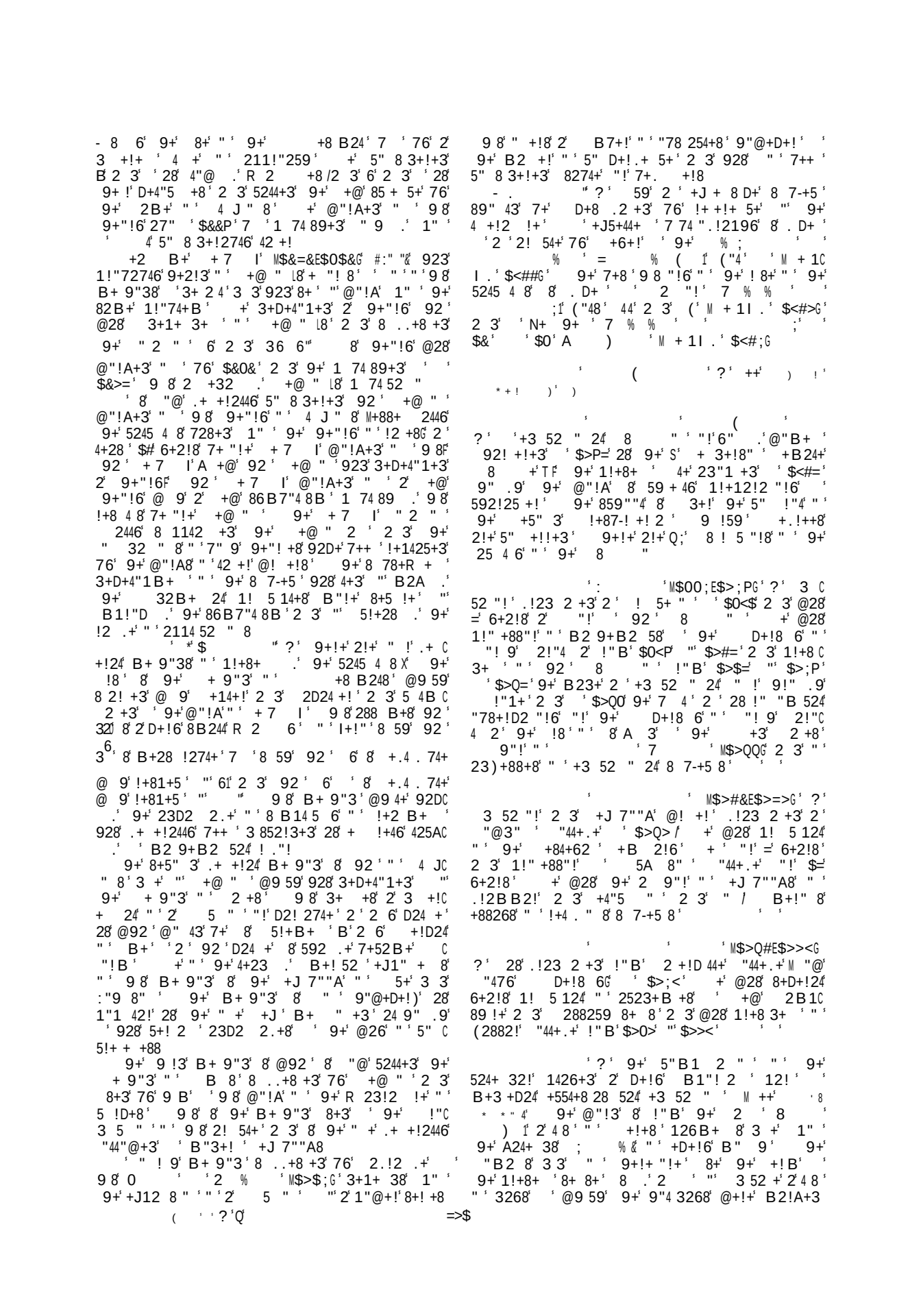
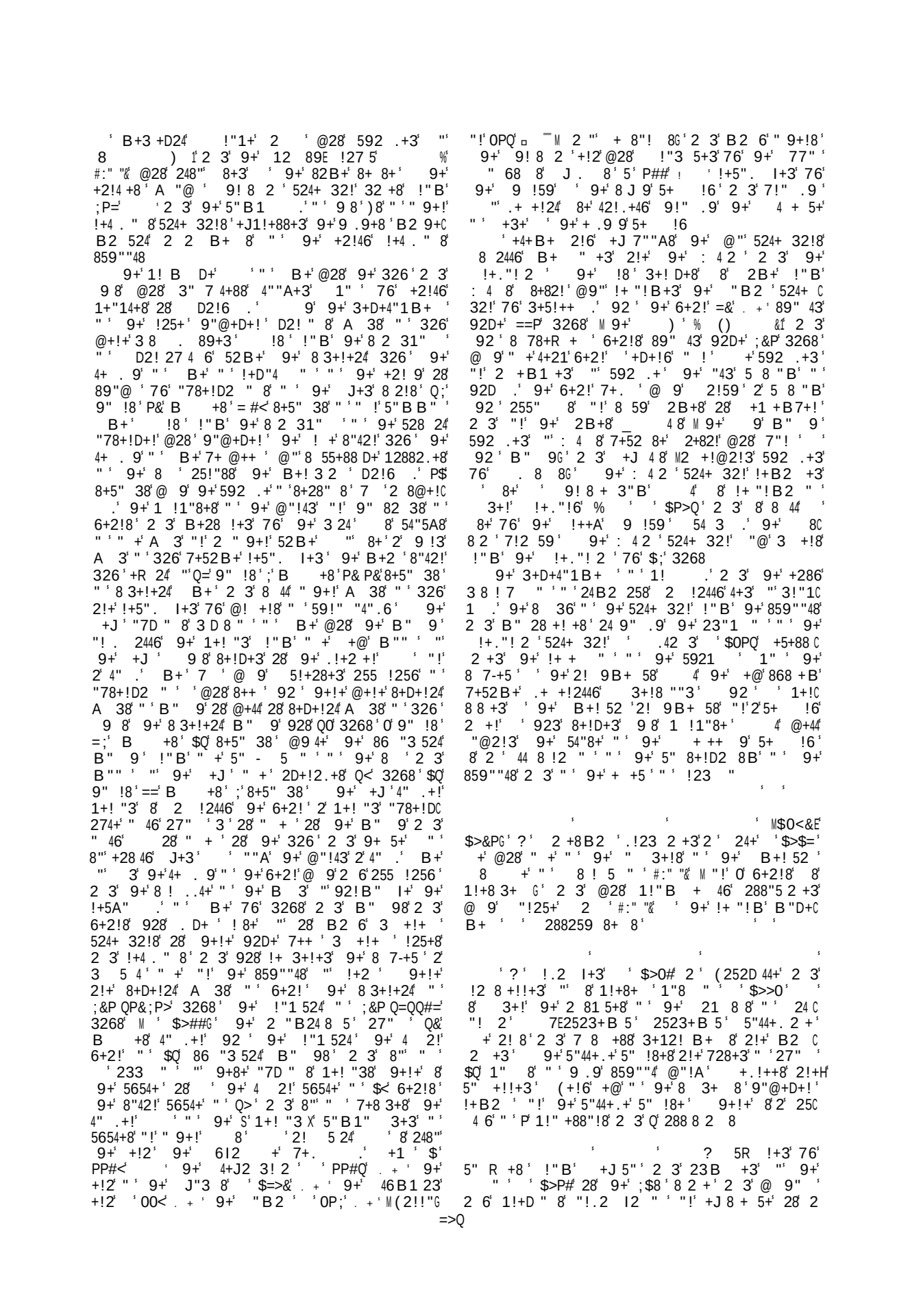
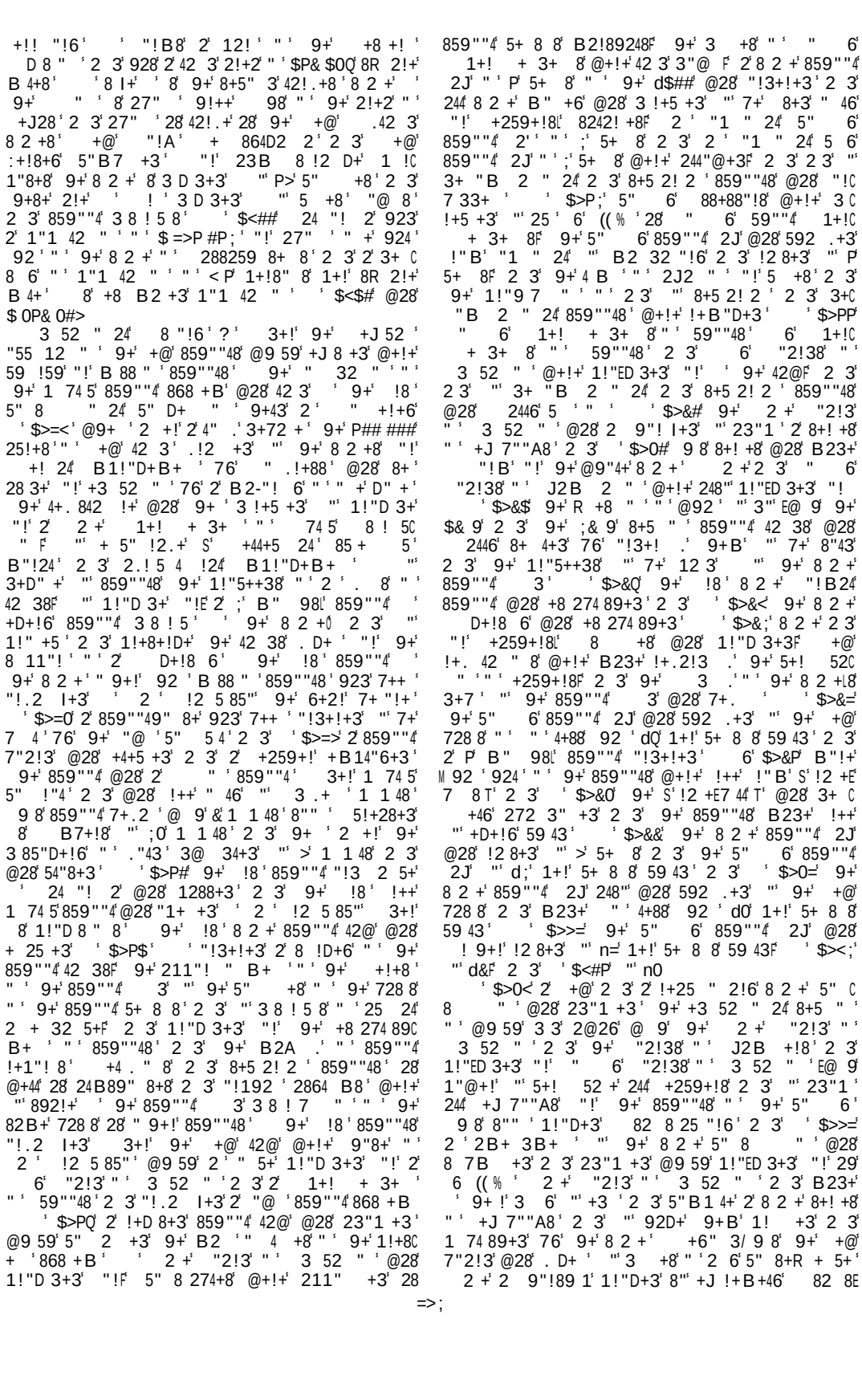
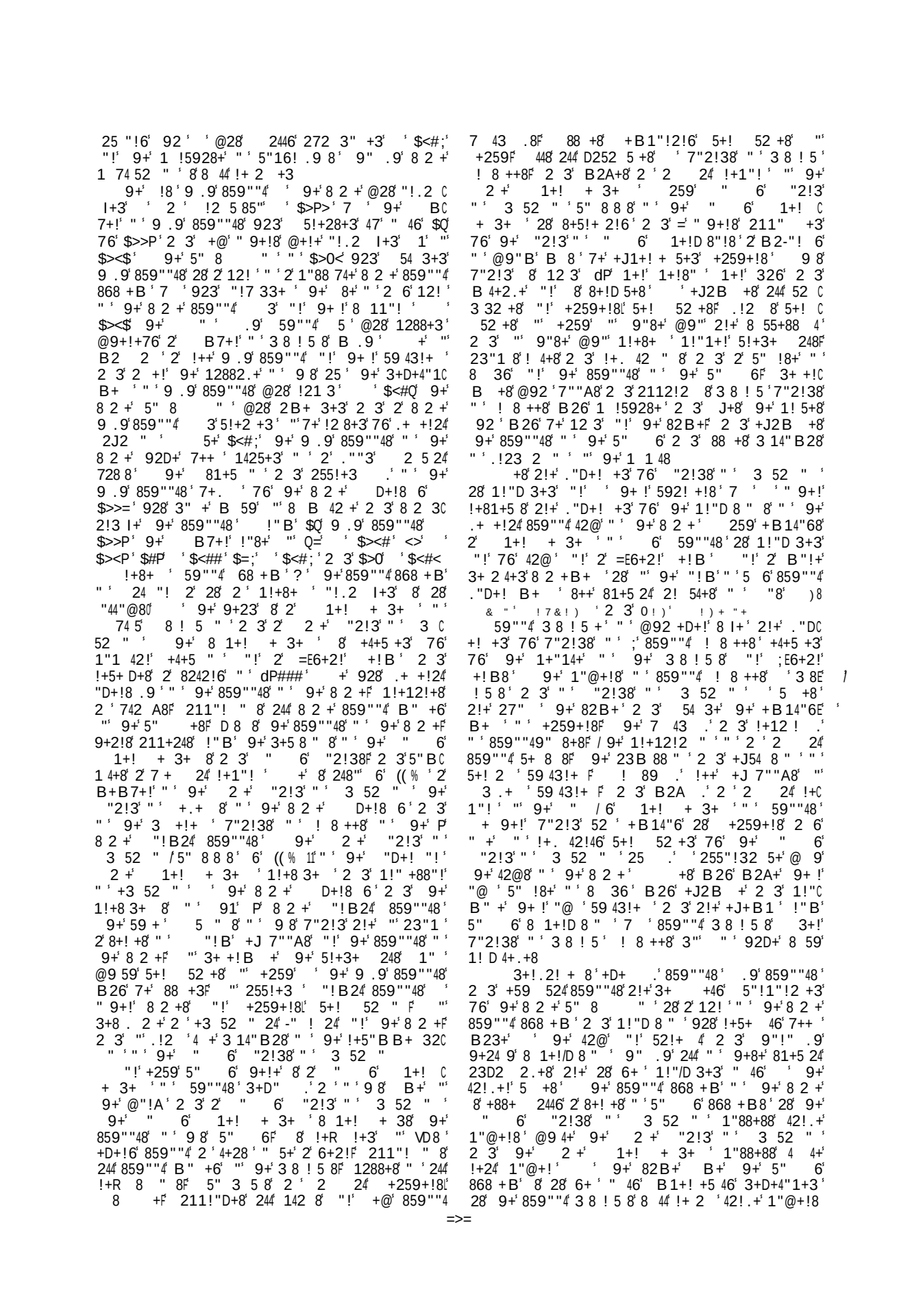






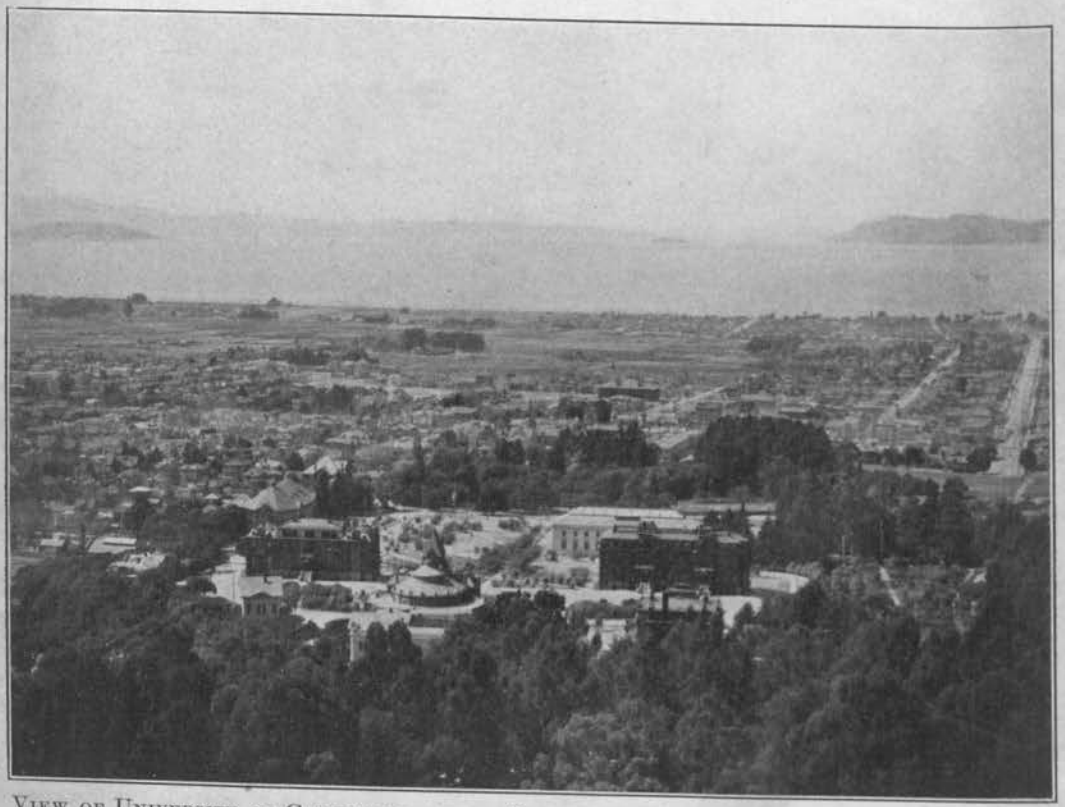






9+ 1 74 52 " " 859""4 +J 7""A8 76 9+ 8 2 + @9 59 8 2 +2 !+ " 9+ 24 "! 2 868 +B 928 1!"D+3 "+ 7+ 2 D+!6 +J1+ 8 D+ 3+! 2A . 2 3 928 +D+! 7++ 82 8 25 "!6 "+ 9+ 859""4B+ " 9+ 8 2 + 59""4 11"! 2 3 J1+ 3 !+ ?+ 9+ 8 2 + "! . 2446 !+5+ D+3 !"B " .!+88 "! 859""48 9+ P## ### 25!+8 " 42 3 .!2 +3 "+ +@8 2 +8 2 3 $>P;@28 .!2 +3 233 " 9+ $& 9 2 3 9+ ;& 9 8+5 " 8 2B" .+ "+ & 0$< ;Q= 25!+8 " 42 3 "!859""48 44 " 9 8 @28 3+D" +3 "+ +3 52 " 7 8"+ 2! 928 7!" .9 7 4 4+ "+ 9+ 8 2 + 9+ 3 2B" /. "+ 7 d$ 0;0 P## $>0& 2 3 "+ 7 dP ;$= #P# 2 9+ B+ " 428 !+1"! 9+ 42!.+ 5!+28+ 9+ 3 @ 9 !+5+ 6+2!8 928 7++ 3 + "+ 9+ !+5+ 1 " 27" " + B 44 " " 3"442!8 !"B " .!+88 $<#0 126B+ " " 9+ &! 1+! 5+ " " 824+8 " 1 74 5 42 3 @ 9 9+ 8 2 + 9+ 2 2 8 2 + 3 "! 9+ B2 + 2 5+ " /+4+B+ 2!6 859""48 @ 9 9+ 8 2 + 5"B+8 !"B 9+ +!+8 " 9 8 1+! B2 + 3 9+ 1!"5++38 " 2 .+ +!24 8 2 + 2J @9 59 B 8 7+ +R 24 "+ " 4+88 92 dO 1+! 5+ 8 8 59 43 PE$O 6+2!8 " 2.+/ 27" dQP# ### !+5+ D+3 2 2446 !"B 9+ 5"442 +!24 9+! 2 5+ 2J+8 2 3 244 1"44 2J+8 44 " 9 8 B 8 7+ 8+3 " 46 "! 9+ 126B+ " +259+!8 8242! +8 +4+B+ 2!6 859""48 .9 859""48 2!+ B2 2 +3 " " 8+12!2 38 12! 46 3+! D+3 !"B 4"524 2J2 " 2 3 12! 46 !"B 2 233 " 24 8 2 + 2J @9 59 B 8 7+ +R 24 2B" " "+ d$P 1+! 1 1 4 2D+!2.+ 32 46 2 + 32 5+ 9+ 9 .9 859""48 " 9+ 8 2 + 3 ! .+ 9+ 1!+5+3 .6+2! 7" /P;1+! 5+ " 2 859""4 B" +6 +J1+ 3+3 5"B+8 !"B 8 2 + 8" !5+8 9+ +4+B+ 2!6 859""4 3 8 211"! " +3 "+ 9+ 5" +8 " 9+ 728 8 " dQP# "!+D+!6 +259+! 244"@+3 "+ 9+ 3 8 ! 5 8 "@ 8 2 3 5 +8 76 9+ " 6 1+! + 3+ 2 3 9+ 7242 5+ Md$# $;1+! 5+ 8 8 59 43 $<#>E$<#<G " 9+ 859""4 5+ 8 8 9+ 9 .9 859""4 2J 8 3 8 ! 7 +3 "+ 9+ 3 +!+ 211!"D+3 9 .9 859""48 76 !8 3 /D 3E .+ " 9+ " 24 2B" +R 2446 2B" .+ 9+ 859""48 !!+81+5 D+ " 8 I+ Md&;< <# $<#>E $<#<G 2 3 9+ 9+ !+B2 .+ " 9+ " 24 " 9+ 728 8 " 9+ B7+!" 1 1 48 2D+!2.+ 32 46 2 + 32 5+ 9+ 9 .9 859""48 3 ! .+ 9+ 1!+5+3 .6+2! Md< ;0 $<#>E$<#<G 259 5" 6 B 8 248"+ !2 8+ 233 " 2 5" 6 2J "!+4+B+ 2!6 859""48 " 4+88 92 dO 1+! 5+ 8 8 59 43 B2A .+ 9+ 5" 6 211"! " B+ " 4+B+ 2!6 859""4 38 "+ 9+ 3 +!+ 3 8 ! 5 8 9+ 24 "! 2 142 8 12! 5 42!46 " +@"! 96 92 + C 8 !+8 2 ."3 859""4 +D+!6 859""4 3 8 ! 5 9+ 8 2 + 2 3 92 2D"!8 9+ 8B244 2 3 ++36 3 8 ! 5 9+ 8 2 + 2 3 9+ 5 6 859""4 B" +6 "!+4+B+ 2!6 859""48 2!+ 233+3 ".+ 9+! 2 3 2!+ 9+ 211"! " +3 76 9+ " 6 1+! + 3+ " 9+ 5 +8 "@ 8 2 3 3 8 ! 5 8 " 9+ 728 8 " dPP# "!+D+!6 0# 859""4 5+ 8 1 59 43!+ "!+ !25 " 9+!+" " Q# "!+ B"!+ 9 8 8 5244+3 9+ +259+! 211"!C " B+ G 2 3 9+ !+B2 3+!+ 8 9+ 211"!C " +3 "+ 244 " 9+ 728 8 " 9+ B7+!" 59 43!+ 2D+!2.+ 32 46 2 + 32 5+ 3 ! .+ 9+ 1!+5+3 .6+2! 9+ !+8 4 " 9 8 211"! " C B+ 142 8 92 24 "! 2 52 126 ."3 8242! +8 "+)9+ +259+!8 244 " 8 859""48 928 2 > B" 98 859""4 1!25 52446 +D+!6C @9+!+ 2 3 "+ 7+ +!+ ! !24 859""48 2!+ "+ 7+ " 3 2 6 8 2 + 9+ " "524 2J2C " 8 +B14"6+3 "!+7" 9 +4+B+ 2!6 2 3 9 .9 859""48 "+8+5 !+2 6 233 " 24 38 92 B26 7+ ++3+3 7" =# 1+! 5+ " 244 859""4 B" +6 +J1+ 3+3 5"B+8 !"B 8 2 + 8" !5+8 27" PP 1+! 5+ 5"B+8 !"B 5" 6 2J2 " 2 3 9+ !+B2 3+!+ !"B 4"524 2J2 " 9+!+ 2!+ "@ 89 1 "!+ 5" 6 1+! B2 + 859""4 38 9+ 8 2 + 244 92D .+ 7++ 1425+3 9+ 8 2 + 3 9+ " 24 +J1+ 3+3 "! 244 A 38 " 1 74 5 859""48 $<#>E$<#<@28 d$P <>P QP& 28+3 " 9+ " 24 1"1 42 " " 9+ 8 2 + 9 8 @28 +R 24 "+ 2 1+! 521 2 +J1+ 3 !+ " d> =0 28 2.2 8 d0 =< "!+ 9+ +8 +! D 8 " 2 3 d= QO "!+ 9+ +3 2 +8 28 2 @9"4+ 9+ 2D+!2.+ 32 46 +J1+ 3 !+ 1+! 1 1 4 @28 d ;#; 2 3 9+ 6+2!46 +J1+ 3 !+ 1+! 1 1 4 2D+!C 2.+ 32 46 2 + 32 5+ @28 dP= <; +J1+ 3 !+8 @9 59 @+!+ +J5++3+3 " 46 76 " 2 2 2 3 +D232 +D232 2 3 289 . " 24" + 2B" .+ 9+ 8 2 +8 !2 8+ B"!+ B" +6 Md;Q ;=G 1+! 59 43 MPE$>6+2!8 " 2.+G 9+ 1"1 42 " 7 8"+ .!+2 8 9+ 1+! 521 2 @+24 9 " 24 C "! 2 92 d &Q !"B +259 23 4 B24+ /@44 1!"3 5+ d$ "! +259 5+ 8 8 59 43 28 2.2 8 2 2D+!2.+ " d O$ "! 9+ +8 +! D 8 " 2 3 d$ #Q "! 9+ +3 2 +8 28 2 @9"4+ 9+ " 24 +J1+ 3 !+8 "! 244 1 !1"8+8 2!+ 42!.+ 46 &# P 1+! 5+ " 9+ " 24 +J1+ 8+ 8 "! +259+!8 8242! +8 6+ 8242! +8 24 "! 2 2!+ 5"B12!2 D+46 9 .9 3 52 " 24 " 3 " 8 ?+ 9+ " 24 1"1 C 42 " " $<## Q= 0 1+! 5+ @+!+ "!+ . 7"! 9+8+ 7+ .+ 3 8 ! 7 +3 @ 3+46 2B" .+ 9+ 3 +!+ 2 " 24 +8 :212 +8+ 2 3 9 +8+ 5" 8 +3 =+1+! 5+ 9+ " 24 1"1 42 " 7 QQ >+1+! 5+ 2!+ 59 43!+ 7+ @++ 9+ 2.+8 " P 2 3 $> 6+2!8 24 "! 2 !2 A .+@ 9 +@ .42 3 9 8 !+81+5 6 8+J PP ;+1+! 5+ 2!+ B24+8 +88 92 $ 1+! 5+ " 9+ 1"1 42 " 2!+ " 9+ 5"4"!+3 !25+ 8" 92 9+ 8 2 + 928 "+ +.!" 1!"74+B 3+24 @ 9 9 4+ 2.! 5 4 !+ 8 " + " 9+ .!+2 !+8" !5+8 " 9+ 8 2 + " 46 =0 &! 1+! 5+ " 9+ 1"1 42C " 4 D+ 5" !6 3 8 ! 5 8 2 3 =; >1+! 5+ 4 D+ 5 +8 " >### 927 2 8 "! "D+! 9+ 2D+!2.+ 4+ . 9 " +! B 1!"/D 3+3 @28 $OQ 3268 +4+B+ 2!6 859""48 2 3 $<= 3268 9 .9 859""48 9+ 2D+!2.+ "! 244 859""48 @28 $>;3268 " 9 9+ 1+!5+ 2.+ " 9+ 859""4 1"1 42 " + !"44+3 9+ 859""48 M>< &>1+! 5+ G 2 3 9+ 1+!5+ 2.+ " 2 + 32 5+ 728+3 " + !"44B+ MOP =;1+! 5+ G 2!+ 9 .9 9 8 @28 +R 24 "+ 2 2D+!2.+ 32 46 2 + 32 5+ " $QQ =3268 1+! 6+2! "!+259 59 43 7+ @++ P 2 3 $> 6+2!8 " 2.+ 9+ 8 2 + 2 3 $;& P 3268 "!

The Hearst Greek Theater at the University of California.



View of University of California and of Berkeley looking towards the Golden Gate.

255!+3 8 9+ @"!A 3" + 27" &# "!B24 859""48 4"52 +3 +48+@9+!+ 9+ +3 2 +8 2 3 2 232 9+ @"" 42!.+ D+!8 +8 25 28 !2 .859""48 "!9 .9 859""4 +259+!8 "! 9+ 8 2 + 9" .9 9+ 8 2 + 248"" +R 2446 255!+3 8 9+@"!A 3" + 27" Q# 8 " 8 " 9 .9 !2 A 9+ +3 2 +8 9+ B2 +!" " +!8 2 + !+5". " 5!+3+ 248 2 3 5+! 52 +8 24 "! 2 8 " + 9+ B"8 4 7+!24 8 2 +8 9+ " 2 3 " +!8 2 +JC 2B14+ "" 9+!8 2 +8 @+44 @"! 96" B 2 " .9+! 2 3 +59 524 3 52 " ?" 9+ D+!8 6 " 24 "! 2 2 +!A+4+6 "1+ +3 $>&< 8 2 38 28 9+5 4B 2 " " 9+1 74 5 859""4 868 +B " 9+ 8 2 + 9+ 2.! 5 4 !24 2 3 B+592 524 5"44+.+ 1!"D 3+3 "!7 76 9+ "!! 44 5 8 5"B7 +3 @ 9 9+ 8 2 + C D+!8 6 9+ +42 3 2 "!3:! D+!8 6 4"52 +3 +2! 24"" 4 " 2 3 "1+ +3 $><$ 9" .9 + 3"@+3 76 1! D2 + 38 892!+8 9+ @"!A " 9 .9+! +59 524 2 3 1!" +88 " 24 C 8 ! 5 " @ 9 9+ 8 2 + D+!8 6 2 3 B26 7+ 54288+3 28 2 8+B E1 74 5 8 " +C 8 3+8 9+8+ @" 7" 9 "@9 59 2!+5"+3 52 " 24 9+!+ 2!+ 2 B7+!" 5"44+.+8 9+ 8 2 + +2!46 244 3+ "B 2 " 24 @9 59 " +!5"44+. 2 + 8 ! 5 " 28 "44"@8 ?

_ +!)) .

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. 2 8 "44+.+	2 !2 5 85"		$>PP	+
2!6L8 "44+.+	2A42 3		$>&;	+
(5+ L8 "44+.+	"8 .+4+8		$>&P	+
24 "! 2 "44+.+	2A42 3	21	$>O#	" 9 8+J+8
448 "44+.+ D " "	2A42 3	" E +5	$>O$	"B+
24 "! 2 55 3+ 24 "44+.+	"8 .+4+8	+ 9	$>>#	" 9 8+J+8
"B " 2 "4C 4+.+	"8 .+4+8	!+87	$>>>	" 9 8+J+8
9!"" 1 "46C +59 5	42!+B " 8	" .! 2823+ 2	$>>>	" 9 8+J+8
		" E +5	$><$	" 9 8+J+8

9+ 8 2 + 248"" B2 2 8 233 " "" 9+ @"!A " 9+ 8 2 + D+!8 6 2 2.! 5 4 !24 2 3 B+592 524 9 .9 859""4 2 2 2 8 7 81" A "@ 28 9+ 24 "! 2 "4)+59 5 59""4 9 8 8 " @28 +8 274 89+3 $<#$ S" 5" ! 7 + "" 9+ 3 8 ! 24 @+4 2!+ " 9+ 2 + " 24 "! 2 T 2!B 859""4 5" +5 +3 @ 9 9+8 2 + D+!8 6 @28 +8 27C 4 89+3 $<#& 2 2D 8 2 2! B" 0## 25!+8 7+ .5 1 !5928+3 @ 9 9+ + " 3+D+4"1 .2 42!.+ 2.! 5 4 !24 +J1+! B+ 24 2!B 2 3 859""4 9+ 8 2 + 248"" B2 2 8 9+ 8 " "!9+ +2 2 3 B7 2 +!A+4+6 9+ 9 +! 2 + M!+ "!B2 "!6 59""4 2 9 +!F 9+ !+8 " 59""4 " 3 8 !6 M "!7"68 " 46 !+C "!B2 "!6 2 4" +F 2 3 9+ 24 "! 2 "B+ "! 9+ 2!+ 2 3 !2 ." " ++74+EB 3+3 9 43!+ 2 43! 3.+

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5 85"" $<#= " !"B " .!2198 " 9+ 9 8 "!6 2 3 V 1!+8+ 8 2 8 " 9+ 24 "! 2 859""48 28 "44"@8 0 , 7 *66 * 0 % ((1 $& 11 Q 2 : %)% (1 Q> 11 B A % 0 ((0 0 % 1 ? = D 0 ((1 % B7+!8 $E; !+1! +3 ") " $ .9 " 1 $<#; E$<#= ! * & 7) 9+ 24 "B 2 2 +J E7""A 68C +B F)% " ("4 % % 11 ==E&# M: + $<## G (( ) ($). % 9)% ((1 24 $>PQE$>&;F 7+ 24 $>&=E $>&P "" $<#OE$<#> '% ! (1 $<#< +3 # : 7 2 < 7 ;)% " M: +$><; G #% * / ($). % '% ((1 M 2 !2 5 85" $>O& G 2 8 58 728+3 " " " ") % 1 $<#<' 2 3 ") " $). 9 " 1 $<$#

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$>&# ! "54+8 2 +@ 8 2 859""4 +259+!2 3 1968 5 2 7"! +@ "!A 2 + 3+D+4"1+3 2 8 B14+ 868 +B " 524 8 9+ 58 2 3 "1+ +3 2 .6B 28 B "8 "
. 8 $>&# ! +@ 8 @28 D +3 "+J142 2 3 44 8 !2 + 9 8 +@ 868 +B " 1968 524 !2 .7+ "!+ 9+5" D+ " " 9+ B+! 52 8 +" 8 ! 5 " :" "& 2 "8 " 288 9 8 B++ .2 + " @28 3!2@ " ! +@ 8 B+ 9"38 2 3 2 5"B B +@28 211" +3 " D 8 9 8 .6B 28 B 9+ !+1"! " 9+ 5"B B +@28 + !+46 2D"!274+ ! +@ 8 @28 248" D +3 " . D+ 2 44 8 !2 " " 9 8 868 +B 7+ "!+ 9+ 8 + !+8"4 " @28 1288+3 23D"52 . 9+ !"3 5 " " 9 8 868 +B " .+ +!) 8+ 859""48
$>&$! +@ 8 +8 274 89+3 9+ "!B24 8 + "! 968 524 3 52 " +@ " 288 !+8 3+ "! +4 8 +4 " " 2!D2!3 "44+.+ !+23 46 5" 8+ +3 " 8+!D+ 28 8 1!+8 3+ 2 3 5" +3 " 2A+ 2 25 D+ +!+8 9+ + +!1! 8+ 4 9 8 3+2 9 2 6+2! 42 +! 9+ 8 + .!23 2 +3 =Q$ B+ 2 3 @"B+ +259+!8 27" +R 24 B7+!8 3 !. 9+ 0 6+2!8 " 8 +J 8 + 5+ 9+ 4 + 5+" ! +@ 8 8+5 ! .!+5". " "!1968 524 !2 . 9+859""4 5 !! 5 4 B 8 89" 2 4+ +!" !"B +43 " + !6 2! 2!3 @9 59 @28 1 74 89+3 9+ % A) ( )% "!: +$>&P +!. D .+J1!+88 " " 9 8 592 .+3 D +@!+.2!3 . 9+ B2 24 427"!868 +B 9+ 81+2A8 28 "44"@8F S 92 868 +B2 5 1968 524 !2 .89" 43 7+ B23+ 2 12! " " 9+ 32 46 !" +" +D+!6 859""4 8 @ 9 B+ 2 27 3 .5" D 5 " 2 3 92 9 8 89" 43 " 7+ B23+ "1 " 24 7 7+ B23+ 9+592 .+ 1 74 5"1 " 3 ! . 9+428 9 ! 6 6+2!8 8 2 B "8 9"1+ 4 8 . " 9+ B+8 9+ !"3 5 " " 9 3!+38 " 859""48 " ! +@ 8L8 .9 6B 28 58 8 24!+236 259 +D .42!.+ !+8 4 8 2 3 8 1!"B 8+ "!9+ !+ 8 B"8 2 81 5 " 8 T
! .9+ ;# 6+2!8 "44"@ .9+ ! !"3 5 " "1 74 5 2 3 1! D2 +859""48 524 8 9+ 58 5" 8 +3 1!25 52446 244 92 @28 2 +B1 +3 859""4 1968 524 !2 . 5+ 9+ +2!46 <#L8 1968 524 +3 52 " 928 3+D+4"1+3 D+!6 !21 346 !2 +3 81+5 24 8 8 2!+ +B14"6+3 " +259 9+ 8 7-+5 " +2!46 2 5 6 859""48 2 3 .6B 28 B8 2!+ 7+ .1!"D 3+3 +@ 859""4 7 43 .8 24 8 9+ 58 8 44"55 16 2 D+!6 42!.+ 1425+ 9+ 1968 524 +3 52 " 5 !! 5 4 B

24 9" .9 " 9+! "!B8 " +J+!5 8+ 8 59 28 .6B 28 58 " 2112!2 8 2 94+ 58 #:" "&1\ 32 5 .#:" "&1 2!+ "@ 5" 8 3+!+3 +88+ 24 2 6 5"B14+ +859+B+ " 1968 524 +3 52 "

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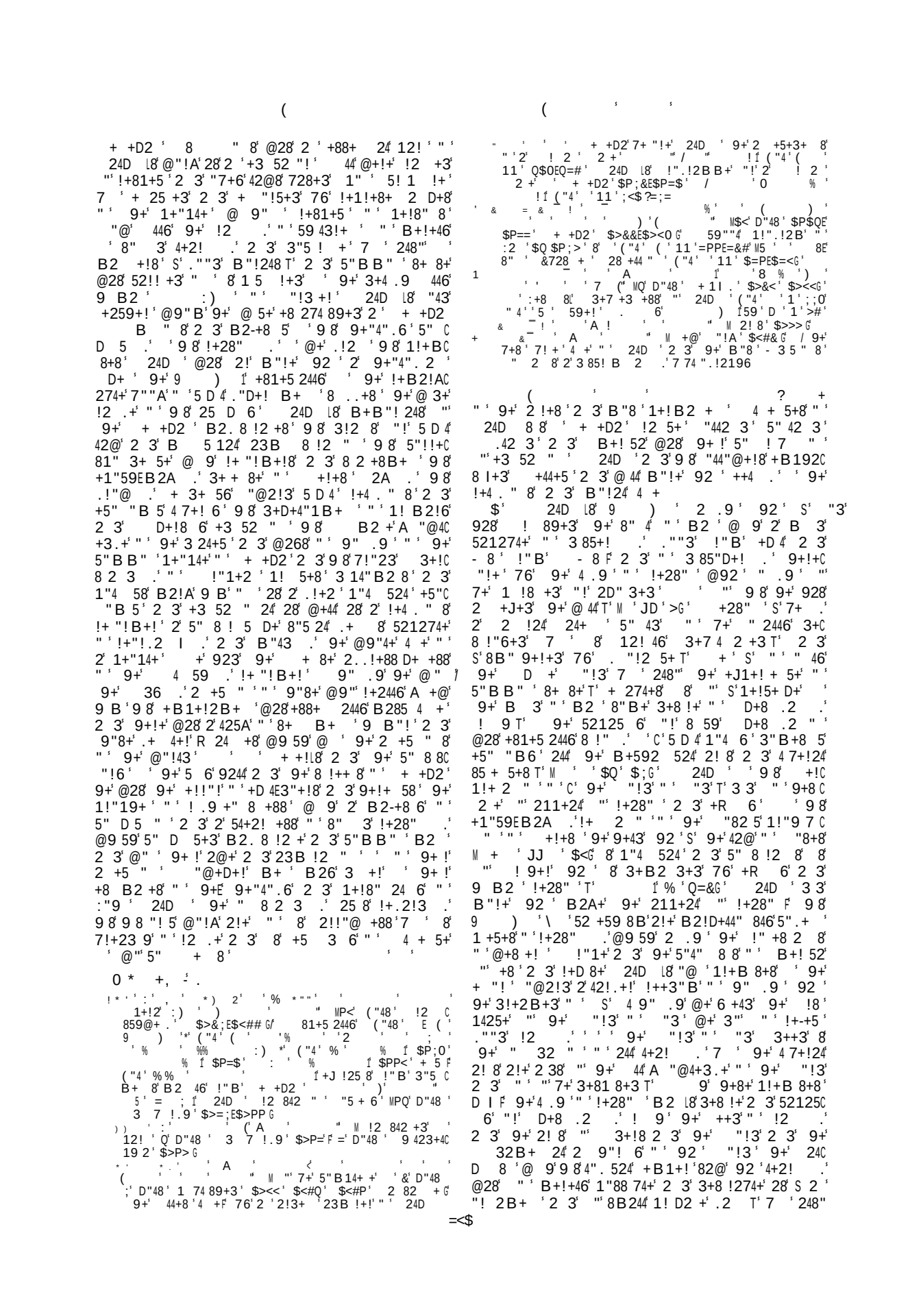
CALVIN

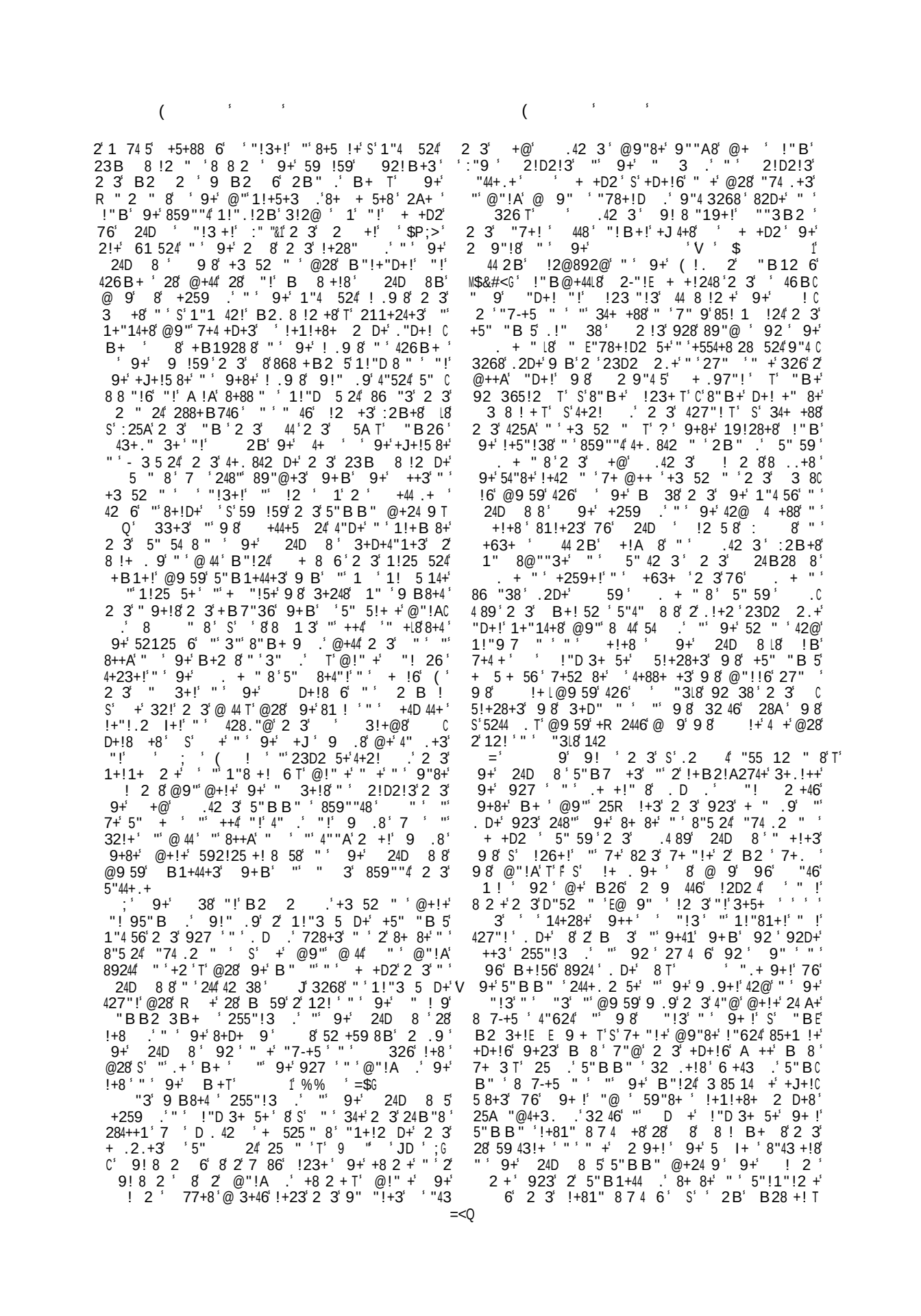
sons. At 14 Calvin came under the sound grammatical training of Cordier (*q.v.*). After his course in arts (chiefly at the college of Erasmus and Loyola), he took his degree in law after 3 years at Orleans and Bourges under de l'Estoile and Alciati (*q.v.*), meanwhile studying Greek with Wolmar. His father's death left him free to follow his preference for humanistic studies. His first book, a commentary on Seneca's *De Clementia*, displayed keen interest in morals and classics. In 1532 or 1533, through God's "secret providence," Calvin experienced "a sudden conversion," "received some taste and knowledge of true piety," and turned to the study of theology. When barely 26 he completed his *Institutio Christianae*

John Calvin (1509–1569).

Religionis, thenceforth the textbook of Protestant theology and arsenal for opponents of loose discipline or arbitrary government. His fundamental premises from which all his teachings sprang were the absolute sovereignty of God and the authority of his "Word." A brilliant and laborious student, winning distinction in debate and lecture room in the university, he early acquired habits of labor at Paris, where he was bred to 11 hours of school work, and at Orleans, where after a light supper he studied until midnight, waking early to think over what he had learned the previous day. Genius and incessant labor enabled him to accomplish a prodigious amount of statecraft and writing, his printed *Opera* filling 59 quarto volumes. Calvin and his followers had no sympathy for "idle bellies who chirp sweetly in the shade."

Obedient to "the calling laid upon him by God," he twice abandoned scholarly life to remodel Protestant but unreformed Geneva. The *Articles* of 1537 submitted by Farel and Calvin to the magistrates outline the statesmanlike program of a reformer working on long lines. The "Word of God" rather than the canon law should be observed. The Church has a right to scriptural creed, worship, and its own organization, involving discipline and excommunication. Children must be carefully trained "to give a reason for their faith" and pass an examination on a catechism. Calvin's French catechism (1537), briefly restating the teaching of the *Institutes*, formed the basis of the Sunday noon catechism which every child must attend punctually under civil penalties imposed upon parents, who were also obliged to train their children at home. Revised (1542) in the form of question and answer, it went through 70 editions in nearly all languages of Europe (14 in English) before 1630, and was among the four, one of which was required of all Oxford undergraduates in 1578. The children were trained in singing the psalms an hour daily in school, that under their lead the whole congregation might learn to "lift their hearts to God." Calvin's successful insistence upon trained congregational singing, his use of stirring melodies, and the translation of psalms by himself, Beza (*q.v.*), and Marot introduced an invaluable democratic and emotional element into public worship. On Jan. 12, 1538 (before Sturm's Strassburg program), Calvin, Cordier, and Saunier published a prospectus of the Genevan elementary schools, marked by three progressive features: careful grammatical drill before rhetorical display; a substantial place for teaching the vernacular and practical arithmetic; training for civil as well as ecclesiastical leadership. The principle that "the liberal arts and good training are aids to a full knowledge of the Word," reasserted in Calvin's *Ecclesiastical Ordinances* adopted by Geneva in 1541, necessitated instruction in "languages and humane sciences" and "the organization of a college for instructing the children to prepare them for both the ministry and civil government." Education was a logical necessity for both layman and minister in Calvin's Biblical Commonwealth, and Calvin was both teacher and pastor. He began his work at Geneva as "Professor of Sacred Letters," lectured in theology throughout his ministry, sometimes to an audience of a thousand (*Opera*, XIX, 20), and worked out his programs of 1538 and 1541 into a unified system of primary, secondary, and university education through the *Collège* and University (*Académie*) established in 1559, which served as a training school and model for Protestants, and whose laws, as Richer and Kampschulte have shown, were utilized by the Jesuits in their *Ratio Studiorum*. The strenuous moral training of the Genevese and the peoples who studied Calvin's *Institutes* and his





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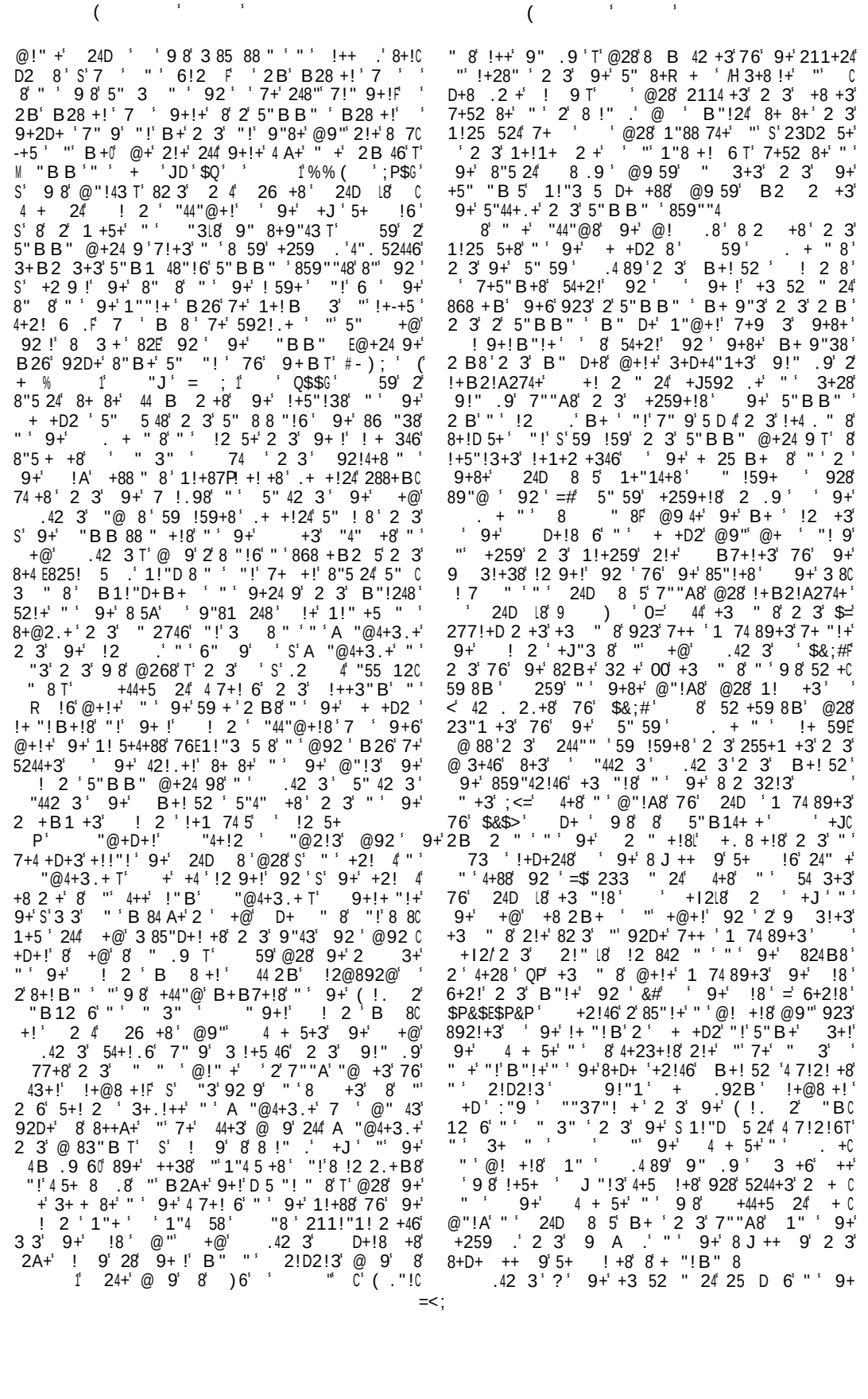

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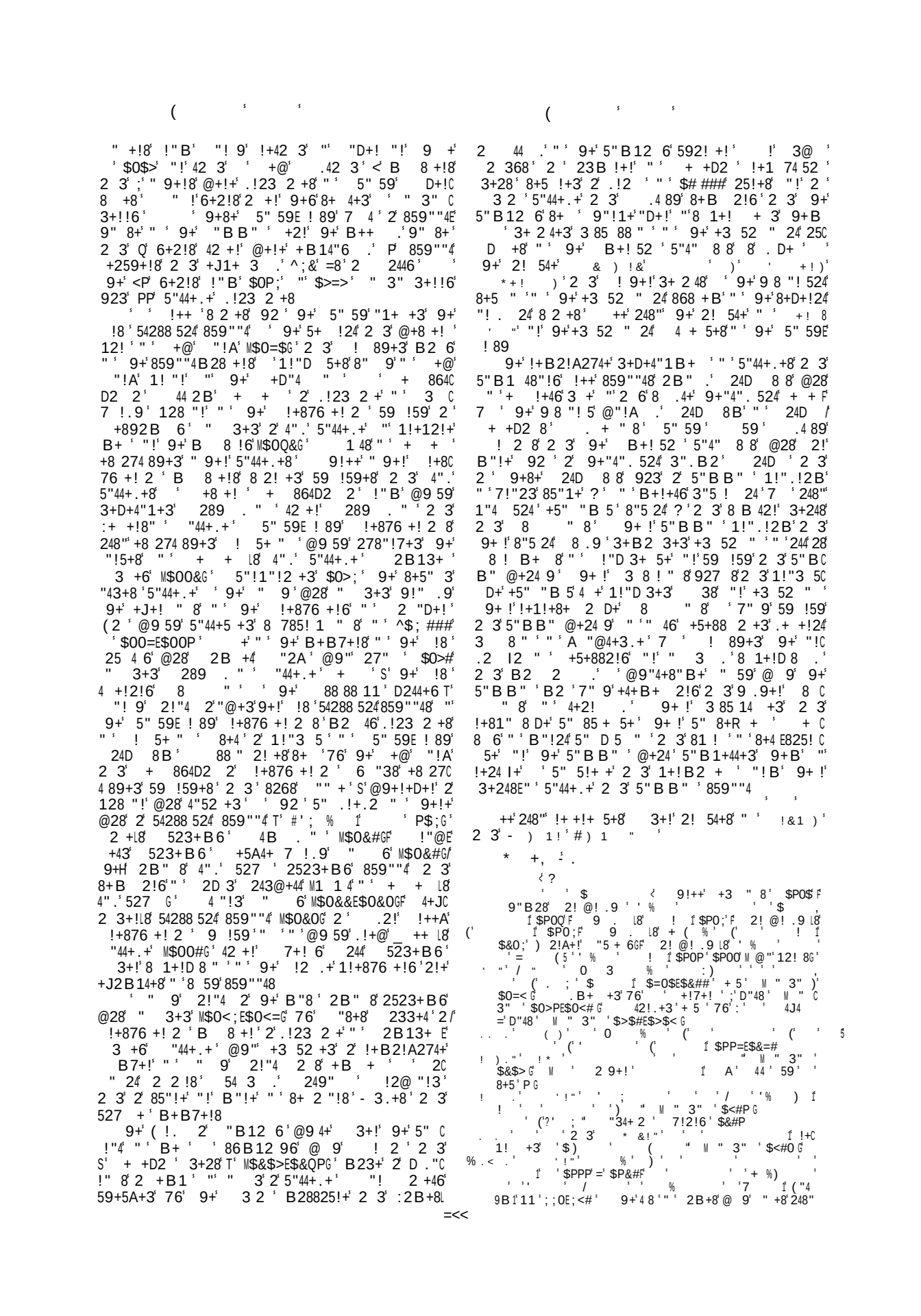

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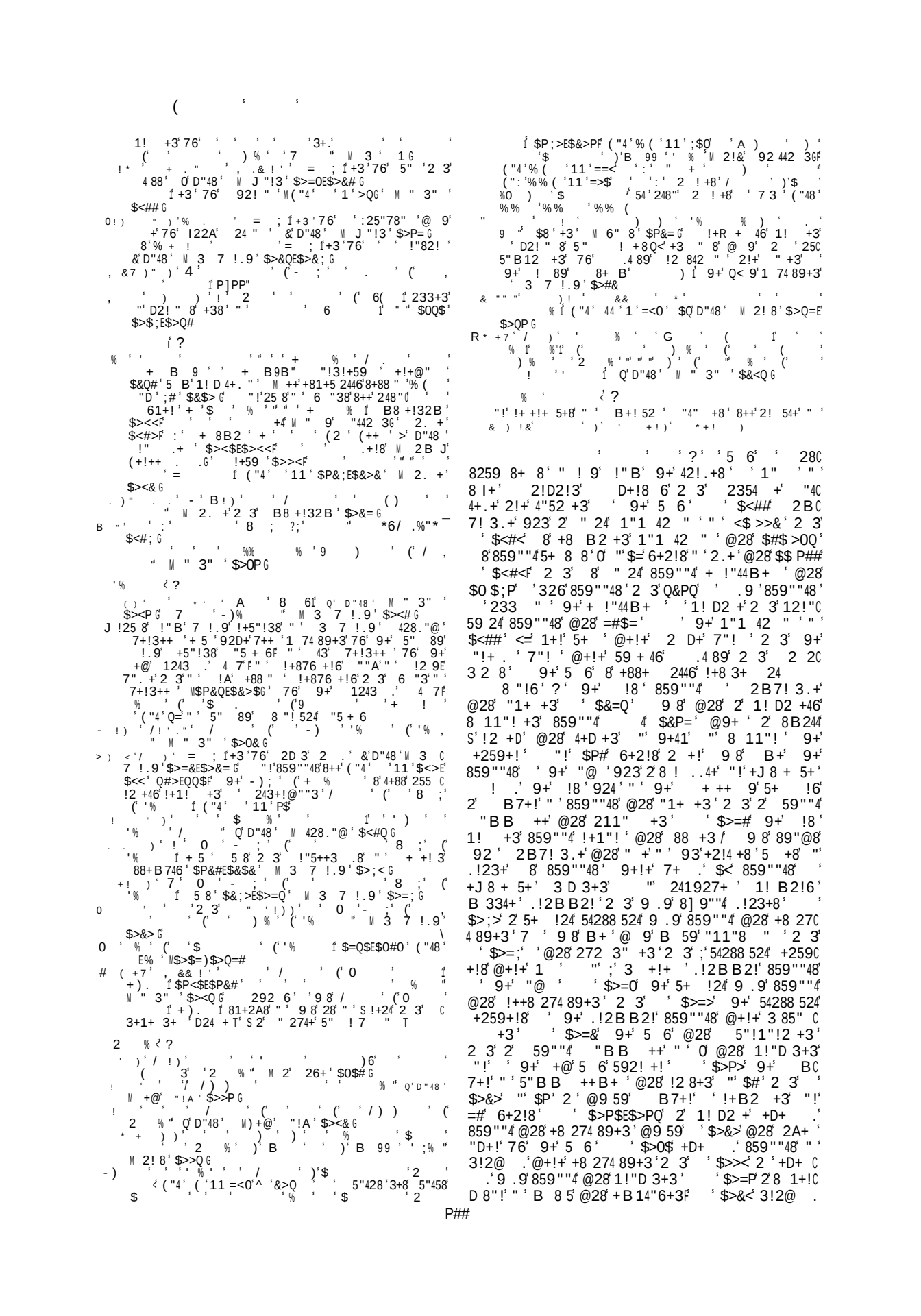

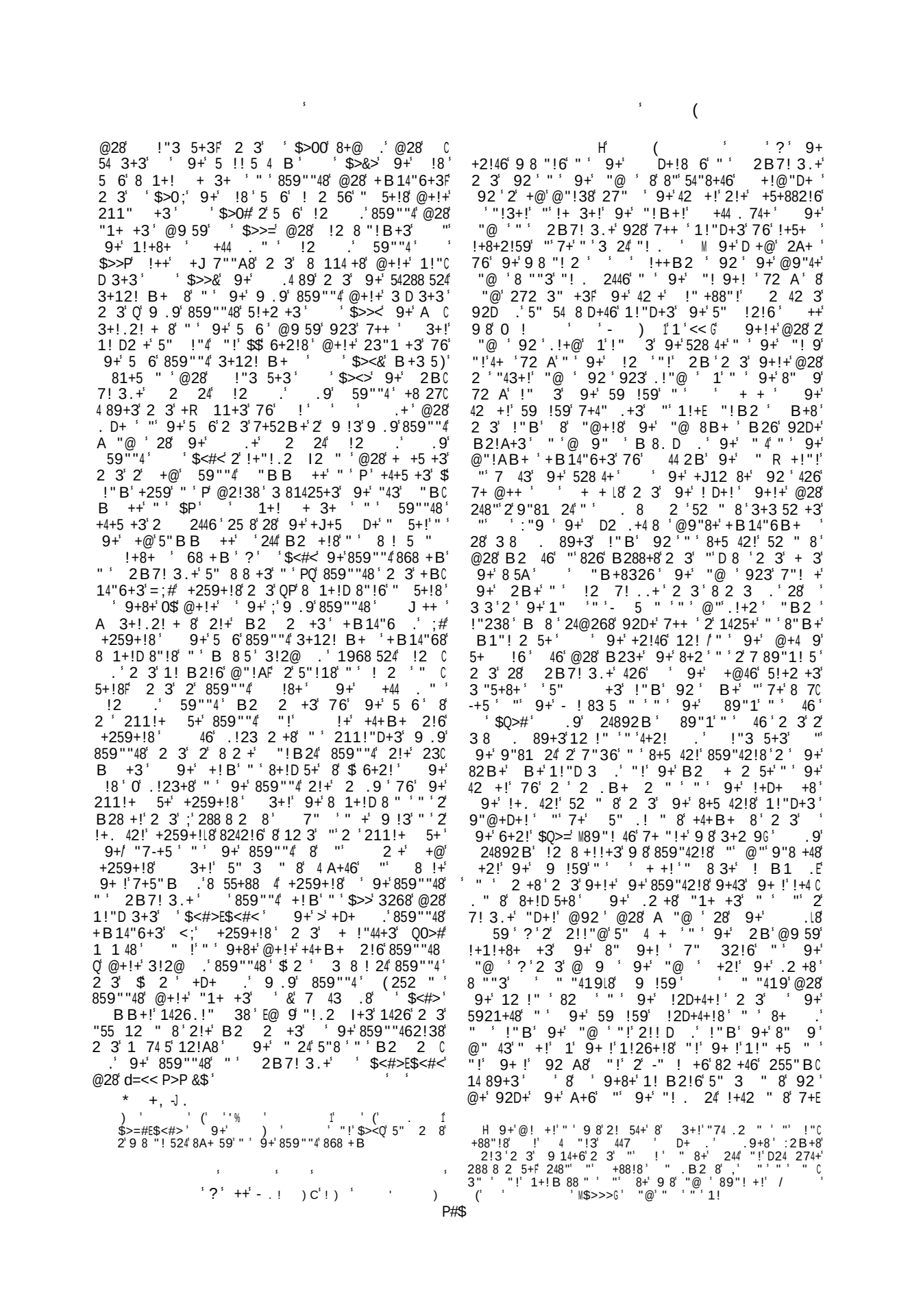

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9+8+' @+' B26' " +' 92 ' " ' 9+' ;# 859"42!8' "!' @9 59' 9+' 5"44+.+' @28' 3+8 . +3' &' 2 '4+28 '@+!+' !+R !+3' "' 7+' ' 9"46' "!3+!8' 2 3' 9+' @9"4+' 7"36'@+!+' "' 2114G' 9+B8+4D+8' "' 9+' 25 4 6' " ' 2! 8' "!' " ' 9+"4".6F' 92 ' " ' 9+' @"' !+5 "!8' 21C 1" +3' " +' @28'2' !2 5 852 '2 3' 9+' " 9+!' 2' 8+5 42!' 1! +8 ' 7" 9' " ' @9"B' @+!+' !+R !+3' "' 92D+' .!23 2 +3' ' 9+' D+!8 6' ' +44"@' B .9 ' 7+' " '2 6' 2 " '"!' !+24B' 7 ' 1!+ +!+ 5+' @28' "' 7+'. D+ ' "' 2' 2 D+' " ' !2 5+F' 1!' "!' "' 9 8' 23B 88 " '9+'@28'!+R !+3' "' 14+3.+' 9 B8+4 ' V 76' "2 9' "' D252 +' 9 8' +44"@89 1' 28' 8"" ' 28' 9+' @28' 211" +3' "' 2 6' B"!+' 4 5!2 D+' 1425+F' 2 3' ' 9+' 59" 5+' " ' 859"42!8' " ' 23B 88 " ' 1!+ +!+ 5+' @28' "' 7+' . D+ ' "' 3 46' R 24 +3' 52 3 32 +8' !"B' 9+' 12! 89+8' 1+! 2 .' "' 9+' 5"44+.+' !+5 "! +8

42!+' 244' " 3+3' ' $;P<' 23"1 +3' @ 9') 4 4+' B"3 52 " ' 9+'! 4+' " ' 24 +!'3+' +! " F 7 ' .!8' 244' " 3+3' ' $;;O' 76' 3@2!3' ' @28'3+8 . +3' 76'9 B' "' + 5" !2.+' 9+'8 36' " ' 9+'5 D 4'2 3' 9+'52 " '42@' 9+' +J+5 " ' " ' 9 8' 3+8 . ' 9"@+D+!' 3+D"4D+3' 1" ' 3@2!3' '@9 4+' 9+'8 2 +8'@+!+'. D+ '76' 592!3' ' 9' 9+' ++ 9' 5+ !6' " 9+!' 4 + 5+8' 5"B+' "' 1426' " 2!3 8B' @9 4+' 923' 7++ ' 1!"3 5 D+' " ' 5!+28+3' B+ 24' 25 D 6' 923' 248"' 7++ '2'8" !++' " ' B 59'5" + " ' 2 ' 7" 9' D+!8 +8' 2 3' @28' "@' !+1!+88+3' 76' !59C 7 89"1' ! 3+4'M$;<&E$=$;G' @ 9'2'8 !" .'92 3 6' D ! +' " '9 8' 2 9"! 6' 28' B+ !"1"4 2 ' 9+' 5 +3' 9+' 592 5+44"!8' " ' 7" 9' D+!8 +8' 7+C "!+' 9 B' "' 2A+' 9+' "2 9' " '"7+3 + 5+' " ' 28C 8 B .' " 5+' +' @28' 9"@+D+!' 5" !" +3' 76' 2' 3 81426' " ' 4 !2B" 2 +' ++4 .' 24 A+' 2 ' J "!3'2 3'2 ' 2B7! 3.+' @9 59'4+3' 9+B' " ' 46' "' !+ 8+' 5"B14 2 5+' 7 ' "' 211+24' "' 9+' "B2 ' 1" F 2 3' ' $=;# "1+' 2! ' (' @28' 3 5+3' "' 211" ' 2' 5"B B 88 " ' "' C R !+' "' 9+' @9"4+' R +8 " ' 2 3' 9+' 1! "!' " ' 9+' . 8 2 8' ' 2! @+44' M2 ' 2 5 + ' 8 7 !7' " ' 2B7! 3.+G' 25 +3' 28' 1!+8 3+ ' +! 2 ' 3"5 B+ 8' @+!+' 1!"3 5+3' ' +D 3+ 5+' @9 59'@+!+' R +8 " 2746'81 ! " 8' 7 '@9 59' 9+' 1! "!' 255+1 +3' 28' " '."'3' 2 9"! 6F' 2 3' 9+' 592 5+44"!' 255"!3 .46' @28' 274+' "' "7 2 ' "!B 24' +J+B1 " ' !"B' 244' +554+8 28 524' - ! 8C 3 5 " '@ 9 ' 9+' !+24B' 92 ' " ' 9+' 89"1' " ' 46' " '+J5+1 +3' 9+' " 32 " ' " ' " ' "44+.+' 2 3' .!8' "44+.+' ' $==$' 76' + !6' (' 2 "!3+3' "5528 " ' "!' 2' 8 B 42!' 3 81426' " ' 59 !59' ++4 .' '+259' 528+' 9+' + 3"@B+ " ' @28'3+! D+3' !"B' 9+'5" 852 +3' +8 2 +8' " ' 9+' 24 + ' 1! "! +8' #:" "&!' ?'S' 5+448 T' 28' 9+6' @+!+' +!B+3' " ' 3 +!+ ' !+4 . " 8' "!3+!8' ' .C 42 3' @9 59' !+1!+8+ +3' 3+1+ 3+ 5 +8' " ' "!+ . ' B" 28 +! +8' ?'2 3' 9+' !+D+ +8' 9 8' 211!"C 1! 2 +3' "' .!8' B23+' ' 9+' @+24 9 +8' " ' 244' 9+' +J 8 .' 2B7! 3.+' 5"44+.+8' 8' 5"3+' @28' 4 4+' B"!+' 92 ' 2' !+1!"3 5 " ' " ' 92 '. D+ ' 76' 44 2B' " ' 6A+92B' ?' !597 89"1' " ' "!A' 2 3' 2' " +3' "11" + ' " ' 9+' B" A8' ? "' +@' "44+.+' J "!3F 7 '- 8 '28' 9+'592 5+44"!' " ' 9+' D+!8 6' 923' 7++ ' B23+' 3+1+ 3+ ' " ' +1 85"124' 2 9"! 6' 8"' 9+' 5"B B 6' "

.L8' "44+.+' @28' 3+542!+3' 76' 12124' 7 44'
3+1+ 3+ ' " ' " 46' " ' 9+' 89"1' " ' 46'7 '
248"' " ' 9+' D+!8 6'2 9"! +8' '244' B2 +!8'
" ' 3 85 14 +' 28' 3 8 . 89+3' !"B' 8 ! 5 " '
"!' " !' 5+ ! +8' 255"!3 .46' 9+' 8"5 + 6'
24 9" .9' '!+B2 +3' 8 7-+5 ' "' 9+' D+!8 6'
28' 2!' 28' !+.2!3+3' A++1 .' " ' 859"428 5E25 8'
+J+!5 8+8'4+5 !+8'2 3' 3 81 2 " 8'@28' " +3'
28' " +' '@9 59' 9+'1! B2!6'3+8 . 8' " '2523+B 5'
4 +'@+!+' "' 2' .!+2'+J + ' . "!+3
_ ++ 8L' "44+.+' " 3+3' 3+!' 9+' 2B+' " '
9+' S' _ ++ 8L' "44+.+' " ' ' 2!.2!+'2 3' '
+! 2!3 T' 2 3' + 3"@+3' ' $==>' 9!" .9' 9+'
.""3' " 5+8' " ' 2!.2!+' " ' -" '!+B2 +3'
M"@ .' 1!"72746' "' 9+' D 4' 2!G' E@ 9" '
8 2 +8' 4' $=0P'@9+ ' 4 I27+ 9' ""3D 44+'
9+'5" 8"!' " ' 3@2!3' (' ""A' 9+' +@'8"5 + 6'
3+!'9+!'1!" +5 " '2 3'.2D+' '8 2 +8' 9+'
5!+3 ' " ' 5!+2 .' 9+'5"44+.+' 92D .' 7++ ' 9 8'
892!+3' 76' @"' R ++ 8' 9+' 2B+' 8' @! + '
_ ++ 8L' "44+.+' 28' 3 8 . 89+3' !"B' _ ++ L8'
"44+.+' J "!3' " 3+3' 76' _ ++ ' 9 4 112'
9+'8 2 +8' " ' ' 2 9+! +L8' 244' " 3+3' '
$=0P'2!+' 59 + 46' "' 7+' " +3' "!' 9+' 25' 92'
9+'8"5 + 6'@28' "'7+'5"B1"8+3'+J54 8 D+46'" ' 9+'
8+5 42!'54+!.6' ' 9+' 9!++' " 32 " 8' " ' :+8 8'
"44+.+' M$=<OG' 9! 8 L8' "44+.+' M$P#PG' 2 3' '
:"9 L8' M$P$$G' @+' 92D+'8 55+88 D+' 44 8 !2 " 8'
" ' 9+'.!+2'!+D"4 " ' 9+ ' '1!".!+88' ?':+8 8'
"44+.+'! 8 .' " ' 9+'8 +' " ' 9+' +J 5' +!6'
" ' ' 923+. B3' ' :"9 L8' " ' 92' " ' 9+'
"!B+!'9"81 24' " ' ' :"9 ' 9+' D2 .+4 8 '@9 4+'
9! 8 L8' "44+.+' @28' 9+' !8' "' !+1!+8+ ' 9+'
4+2! .' !"3 5+3' 76' !28B 8' MZ a G' 92'
.!+2' 859"42!' @9 4+' ' 2B7! 3.+' S' A+1 'T' '
_ ++ 8L' "44+.+E 2 3' 9+!+' ' @28' 92' 9+'
52!! +3' " ' 9 8' 427"!8' " ' 9+') ' 9) '
) ' 2 3' " ' 9 8' +3 " ' " ' :+!"B+' 89"1'
89+!' 9 8' 12 !" ' @28' 5" +88"!' "' 9+' 236'
2!.2!+ ' 9+' B" 9+!' " ' + !6' (' 2 3' 248"' 2'
3 8 . 89+3' 7+ + 25 "!' " ' 9+' D+!8 6F'
2 3' 9+' 248"' 3!+@' 1' 8 55+88 D+' 5"3+8' " ' 8 2 +8'
"!' 9! 8 L8' "44+.+' 2 3' ' :"9 L8' ' @9 4+'
9+' 8 3 +8' @9 59' 9+' +81+5 2446' 12 !" I+3' @+!+'
12! 46' +@' ?' "!' ' @28' "@' 92' +7!+@' 2 3'
!++A' !8' 7+.2 ' "' 7+'!+5". I+3' ?'9 8' 8 2 C
+8' 52 " ' 7+' 3+ + 3+3' !"B' 9+' !+1!"259' " '
+B7"36 .' B 59' 92' @28' 7+5"B .' "78"4+ +'
' PQ' 2' !2 842 " ' " ' 9+' + ' 0 '
" ' 24+ ' 76' 9"B28' 25!+' @28' 1! +3') '
% ' . 1' 2' 9+' 1!+88' " ' :"9 '
7+!59' B"8' 1!"72746' 2' 2 D+' " ' "4". +'
7+!59'1! +3'248"' " 9+!'7""A8'27" ' 9+'82B+'
B+' 7 ' ' @28' " ' 4' B"!+' 92' 924' 2'
5+ !6' 923' +4218+3' ' $P>;' 92' 9"B28'
9"B28' @28' 211" +3' D+!8 6' ! +!
9+' + "!B2 " ' 89+!+3' ' 2' 8+! +8' " '
592 .+8' "' @9 59' 2B7! 3.+' !"B' 8' .+"E
.!21 524' 1"8 " ' @28' +81+5 2446' "1+ ' ?' 9+'
5"B B+!5 24' +!5" !8+' 7+ @++ ' "! 9+! ' +!C
B2 6' " ' 9+' " +'92 3'2 3' .L8' 6 ' "!C
@ 59'2 3' 18@ 59' " ' 9+' " 9+!' 7+ .' ' 9"8+'
3268' 24!+236'5" 8 3+!274+' 3+!' 9+'2 81 5+8'
" ' 9"B28' !"B@+44' + !6' (L8' 59 +'
B 8 +!' 9R' B"D+B+ '25R !+3'.!+2' "!5+'
9+' D+!8 6'@9 59'@28'9"@+D+!'12! 46'82D+3'
!"B' 9+'92 38' " ' 9+'5" ! +!8' @9"' 8" .9'
"' 14 3+!' '76' + !6L8' 1+!8" 24' +!D+ C
" ' 2 '"5528 " ' " '@9 59' 9+' 8' 82 3' "' 92D+'
"78+!D+3' 92'9+' 9" .9'9+'923' " '+48+@9+!+'
'9 8'!+24B'C'8"' B2 6'1+!8" 8'8"'9" +8 46'B26 E'
26 +3' '46D6 .' 7'8"' 4 4+' 4+ 3' 2 3' !+ T'
6' 9+' "624' - 5 " 8' " ' $P;P' 1!"D 8 " '
@28' ! 9+!' B23+' "!' 8 ! 5 " ' '4". 5'!9+ "C
! 5'2! 9B+ 5'.+".!2196'2 3' B 8 5F' @9 4+' 9+'
8 36' " ' ! 8 " 4+' @28' !+ 3+!+3' B"!+' +44 C
.+ '76' 9+' 8 78 " ' " ' 9+' 5"B B+ 2! +8'
" ' 9+' 9 B2 8 8' "!' 9+' "785 !+' .4"88+8' " ' 9+'
859""4B+ ' '233 " 24' 8 B 4 8' @28' BC
12! +3' 76' 9+' 1!+8+ 5+' " ' 8"B+' 3 8 . 89+3'
859"42!8' 28' +259+!8' ?'2B" .' 9+B' !' :"9 '
9+A+' M. D G' :"9 ' +3B2 '2 3' ".+!' 8592B'
#:" "&" 8592B'@28'211" +3' +23+!' ' !++A'
2 ' ' :"9 L8'@9+!+' 9+'! 5+ D+3' 2'4 7+!24' 8242!6'
2 3' 5" 8+R + 46' @28' +B7"43+ +3' "' B2A+' 2'
B+46' 1!" +8' 2.2 8' 2' 5!6 .' 27 8+' ?' 9+'
3 85! B 2 +' 23B 88 " ' " ' 9+' 8" 8' " ' 9+'
@+24 96' @9"' 923' 5"B+' 1'@ 9' "' + " ' " '
8+! " 8' 8 36' 2 3' @ 9' 5"!!+81" 3 .46' 8B244'
2 2 B+ 8' 8' 1!" +8' 233!+88+3' "' !2 E'
B+!'!+259+3' 9+'+2!8' " ' + !6' ('2 3' ' 9+'
+@'8 2 +8' . D+ ' "' ' :"9 L8' ' $P=P' '@28'
+J1!+8846' 1!"D 3+3' 92' "' 1+ 8 " +!'89" 43'7+'
23B +3' @9"' 3 3' " ' 24!+236' 1"88+88' 2' 8 C
5 + 'A "@4+3.+' " ' 2 ' "' + 274+'9 B' "' 1!" '
76' 9+' 5" !8+' " ' 8 ! 5 " ' 9 8' 1!"D 8"'
B26' 7+'!+.2!3+3' 28' 89+! .' '2' B"!+' .+ +!24'
2 3' 9 .946' B1"! 2 '+ 25 B+ '@9+!+'76' 9+'
D+!8 6' "!B2446' !+ " 5+3' 9+' 5 " ' " '
+259 .' S'.!2B B2!' T' #" "' 2 G' 9+!+'76'
!+5". I .' 9+' 8 ! 5 " ' . D+ ' ' 9+' .!2BC
B2!' 859""48' 9!" .9" ' 9+' 5" !6' 28' 1!+C
12!2 "!6' "' 8' "@
2.324+ +' "44+.+' " 3+3' ' $P=Q' 2 "!38'
2 " 9+!' 44 8 !2 " ' " ' 9+' 592 .+' '1!".!+88'
28' '!"8+' " ' 9+' 8 +' " ' 2 ' 2 5 + ' " 32 " '
3+8 . +3' 76' 9+' + +3 5 +8' "!' 9+' 9" 8 .'
" ' B+B7+!8' " ' 9+ !' "!3+!' 8 36 .' ' 9+' C
D+!8 6' !' 9"B28' 34+6' 9+' " 3+!' ?'
9 B8+4' + ! 59+3' 76' 9+' 14 3+!' " ' 9+' B" C
28 +! +8' ?'1!"D 3+3' 2'2B14+' + 3"@B+ F 7 '
'@28' " ' 4' 9+' 6+2!' $PP=' ' 9+' !+ . '
" ' 9 4 1' 2 3' 2!6' 92' 9+' 5"44+.+' !+5+ D+3'
8' 8 2 +8' @9 59' 5" 8+R + 46' !+ 4+5' 5" BC
12!2 D+46' 4 4+' " ' 92' !+.2!3' "!' 54288 524'
4+2!' .' "' 7+' " +3' ' 9+' "! . 24' 8 2 +8' " '
9! 8 L8' 2 3' ' :"9 L8
! .' 9+' + "!B2 " ' B"!+"D+!' 9+' 4 C
7!2! +8' 9!" .9" ' 9+' D+!8 6' 923' 8 8C
2 +3' !!+12!274+' 4"88+8' C' ' 9+' 1!+8+ '
B+ T' 8268' !' :2B+8' S'" 46' $<' " ' 9+' C
D+!8 6' 7!2!6' 7""A8' 2!+' A "@' "' +J 8' " '
" ' ;;#' ' "!1 8' 9! 8 ' ;' " ' " ' OPF' 2'
_ ++ 8L' '7+4 +D+' " +F' 2' .L8' $" '" '$0&F'
2' ! 6' 244' $F' 2' ' 2 9+! +L8' " +'" '
" '$## T' M +' S' 9+' " 32 " ' " ' 7!2! +8 T'
' ("4' ('11' =QQE=QP' " ' . ' / ' (
') 1' $<#< G' "' 2 9+@' 2!C
A+!' M !597 89"1' " ' 2 +!7 !6' $PP<E$POPG'
7+4 .8' 9+' 5!+3 ' " ' 7+ .' 24B "8' 9+' !8' "

!"3 5+' "' 9+' D+!8 6' " ' " 46' 9+' 3 8C 5! B 2 " ' " ' 9+' 7 74 "19 4 8 ' 7 ' 248"' 2 '23+C R 2 +' 8+ 8+' " ' 9+' 3 +8' 92 ' 3+D"4D+' " ' 9+' 4 7!2! 2 ' ' 8 55++3 .' "' 9+' B28 +!89 1' " ' "!1 8' 9! 8 ' "44+.+' ' $PP=' 9+' 923' 3!2@ ' 1' 2' 8+! +8' " ' !+. 42 " 8' 3+8 . +3' "' 1!" +5 ' 9+' 5"44+5 " ' @9 59' 9+' 4 B2 +46' 7+R +2 9+3' "' 9+' 5"44+.+' !"B' 4 A+' 81"4 2 " F 2 3' ' 2' 8B244'592B7+!' "D+!' 9+' 2 +E5921+4' 9+' 2B" 8' 2!A+!' 88' @+!+' 82 +46' 9" 8+3' "!' 8"B+' QP# 6+2!8' 8' 2!597 89"1' 2.2 ' 9+' 923' 9+' !8' 1 5A' " ' 9+' @9"4+' " ' 9+' 14 3+!" " ' 9+' 4 7!2! +8' 2 3' B B+ ' !"" B8' " ' 9+' 3 88"4D+3' !+4 . " 8' 9" 8+8F' 2 3' 9 8' 8 !2.2 8' @+!+' " 46' "" '!+236' "' .2 ' 9 8' 2D"!' 76' 24B"8' "!5 .' 1" ' 9 B' 9+' !+28 !+8' " ' 9+' 52 9+3!24' 4 7!2! +8 ' 9+' !2 8 " ' !"B' 9+' B+3 +D24' "' 9+' B"3+! ' 5" 5+1 " ' " ' +3 52 " ' 2 3' 4+2! .' ! 6' "44+.+' M$P=&G' 2 "!38' 2' 8 ! A .' +J2BC 14+' 9+' "! . 24' 8"5 + 6' @28' 5"B1"8+3' +J54 C 8 D+46' " ' B+B7+!8' " ' 9+' D+!8 6F' @9 4+' 8+D+!24' 3 8 . 89+3' !++A' 859"42!8' !"B' ' :"9 L8' @+!+' 2B" .' 9"8+' +4+5 +3' "' 9+' !8' +44"@89 18' ' @28' 248"' 2' 1!"B 8 .' 8 . ' 92 ' 9+' " 46' 4 B 2 " ' B1"8+3' ' 8 59' +4+5C " 8' @ 9' !+81+5' "' 5" +8' @28' 92 ' " ' B"!+' 92 ' ;' +44"@8' 2 ' 2 6' " +' B+' 89" 43' 7+' 2 D+8' " ' 9+' 82B+' 5" 6

9+' + "!5+3' +J 4+' " ' 2' 42!.+' B7+!' " ' !" +8 2 ' 859"42!8' 3 ! .' 9+' !+ . ' " ' 2!6' B 8' 7+' 4""A+3' 1" ' 28' B2!A .' 2' 1+! "3' " ' !+25 " F 2 3' 9+' 7 ! .' " ' !2 B+!' 2 B+!' 2 3' 34+6' 2' J "!3' 2 3' 92 ' " ' :"9 ' 44 +!' 2' !" +8 2 ' 859"42!' " ' ./8' "44+.+' 2' 2BC 7! 3.+' 7!" .9' 9"B+' "' 7" 9' 9"8+' 5"BC B +8' 9+' 8 +!' !+24 +8' " ' 9+' !+4 . " 8' 5! 8 8' 9+' 23B 8 !2 D+' 592 .+8' 92' @+!+' !"3 5+3' 9"@+D+!' 24" .' @ 9' 9+' +@' 8 2 +8' . D+' ' $PP0' .+ +!2446' A "@ ' 28' 9"8+' " ' 2!3 24' "4+' 1!"D+3' 24B"8' "1+!2C D+F' 2 3' !"B' 9+' 255+1 2 5+' " ' 9+' 592 5+44"!C 89 1' " ' 9+' D+!8 6' 76' !' 44 2B' +5 4' $PP<@+' B26' 32 +' 9+' 5"B B+ 5+B+ ' " ' 2' +@' +!2F 7 ' " ' 9+' " 9+!' 92 3' 9+' 1"4 524' + +5 8' " ' 9+' ! ."!" 8' B+28 !+8' 92 ' 592!25 +! I+3' 9+' 1!+5+3 .' !+ . ' @+!+' 4" .' 2 3' 8+D+!+46' +4 ' 9+' 2! 2 ' +J 4+8' 28' 9+6' @+!+' +!B+3 ' 923' + 5" +!+3' 27!"23' 1! D2 " 8' 2 3' 8 +! .8' @9 59' .2D+' 1+5 4 2!' + 8 6' "' 9+ !' 8+ 8+' " ' @!" .F 2 3' 3 ! .' 9+ !' +!5" !8+' @ 9' 9+' !" +8 2 ' 9+"4". 2 8' " ' +!B2 6' 2 3' @ C I+!42 3' 9+6' 923' +J592 .+3' D +@8' 2 3' 2!! D+3' 2 ' 5" 54 8 " 8' @9 59' B2 +! 2446' B"3 +3' 9+ !' "@ ' "!B+!' 9+"4". 524' "1 " 8' ' 9+ !' !+ ! ' "' .42 3' B2 6' " ' 9+B ' 2.2 ' 52B+ 7+ "!+' 4" .' 3+!' 9+' + 5+' " ' 9+' 5" 59' 59"'"4' " ' !+876 +! 2 ' 3"5 ! +' 2 3' " ' " ' 9+8+' 8+D+!24' 1928+8' " ' !" +8 2 8B' .4 89' ! 2 8B' @28' ' ! ' 3+D+4"1+3 ' 4 I2C 7+ 9 ' 9"@+D+!' @9"' 923' 2' .+ +' 1!+3 4+5 " ' "!' 9+' .4 52 ' ! 24' @28' 3 8 5 46' "11"8+3' "' 9+8+' "!+ . ' 4 + 5+8F' 2 3' 288 8 +3' 76' +5 4' 3 3' 9+!' 7+8 ' "' 9"43' 9+' +@' B"D+B+ ' 59+5A' @9 4+' 248"' 8"" ' 7+52B+' +D 3+ ' 92 ' ' @28' 9+!' 3+8 . ' 2 3' 92 ' " ' B"8 ' " ' 9+!

B 8 +!8' 2 ' " 5+' "' B2A+' 9+' D+!8 +8' B"!+' + 5 + ' !2 .' 859"'"48' "!' 9+' 54+!.6' 2 3' 248"' "' 7! .' 9+B' "' 54"8+!' !+42 " 8' @ 9' 9+' !"@ ' '@28' 9 8' 92 ' " ' " ' 9+' &' 25 4 +8' " ' @9 59' + !6' (' 923' " 3+3' 1!" +88"!C 89 18' ?' 9+"4".6' 5 D 4' 42@' B+3 5 +' +7!+@' 2 3' !++A' ?' " 6' 9"8+' @9 59' 8 78+!D+3' 9+' 54+! 524' 1!" +88 " ' 5" +3' "' 4" ! 89' 9+' 8 36' " ' 9+' 5 D 4' 42@' 24B"8' 3 +3' " ' 3 88"C 5 2 +3' 28' ' @28' 24 A+' !"B' 9+' 52 " ' 42@' 2 3' !"B' .4 89'42@F @9 4+' 92 ' " ' B+3 5 +' @9 59' .+ +!2446' "!B+3' 12!' " ' 9+' +3 52 " ' " ' 9+' 54+! 5' B2 2 +3' 8' .!" 3' 2 3' @28' 23"!' +3' ' 9+' 8+D+ ++ 9' 5+ !6' 76' 2B+8' 8 59' 28' 9"8+' " ' ! ' 2 8' M. aG' 47+! ' 2!D+6' 2 3' 4 88" ' 9+"4".6' 9"@+D+!' !+B2 +3' 9+' 1!+3"B 2 ' 8 36F' 2 3' " ' !2 ' 2 3' 8+ 3' "! 9' @+44E+R 11+3' 3 D +8' 1"88+88 .' 2' 5"BC 1+ + ' A "@4+3.+' " ' 9+' "! . 24' " . +8' " ' 9+' 43' 2 3' 9+' +@' +8 2B+ ' 23+R 2 +46' !+23' ' 9+' B"8' 2 9"! 2 D+' 2 ! 8 5' 4 +!2 !+' 2 3' +3' 76' 1!25 5+' ' 9+' 2!' " ' 3 81 2 " ' "' 9"43' 9+ !' "@ ' 2.2 8' 9+' 2882 42 8' " ' 9+ !' 9 !59L8' 3"5 ! +8' 7+52B+' 24B"8' 9+' 8"4+' 1!"C +88+3' 2 B' " ' 9+' 8 ! 5 " ' B12! +3' 2 3' 9+' +J+!5 8+8' !+R !+3' + 9+!' 2 ' J "!3' "!' 2 ' 2BC 7! 3.+

" .9' 9"@+D+!' 8 ' !+B2 +3' " ' "B2 ' "78+!D2 5+' ! 24' 2 3' 23"! B+ ' ' 9+' 8+!DC 5+8' " ' 9+' 9 !59' "' 2 "!3' 9+' ! 2 ' 2' 1!+ +J ' "!' 9+' B2 +8 2 " ' " ' 8+! " 8' 3 85" C + F 2 3' 9+' !+1!+88 " ' " ' 8 59' ++4 .' 8++B+3' "' 9+' 5"B1 4+!8' " ' 9+' 4 I27+ 92 ' 2 +8' " ' $PO# 2' "!+B"8 ' +5+88 6' 9+' +@' "3+' 255"!3 .46' @9 4+' 8 44' !+ 2 .' +2!4 +!' + 25 C B+ 8' MA "@ ' 28' 9+' ' ' :) I' 2 3' B+3 +D24' 24 A+' ' 9+ !' 5" 5+1 " ' 2 3' 9+ !' "! . G' 248"' +B7"3 +3' +@' 1!"D 8 " 8' @ 9' !+C 81+5 ' "' 9+' 5" 8 " ' " ' 9+') ' 2 3' 9+' 5" 3 " 8' " ' .!23 2 " ' @9 59' + 3+3' "' 1425+' 9+' 23B 8 !2 " ' " ' 2 2 !8' ' 9+' 92 38' " ' 2' D ! 24' "4 .2!596' 9+') ' ?' 8"' 5244+3' !"B' 8' 7+ .' 5"B1"8+3' +J54 8 D+46' " ' 9+' +238' " ' "44+.+8' ?' " ' " 46' 7+52B+' 9+' 8 1!+B+' 2 9"! 6' 7 ' 9+' 2 2446' +4+5 +3' !"5 "!8' @9"' !"B' 9+' "11"! +8' 9+6' 923' 7+ "!+' 1"88+88+3' 923' !+1!+8+ +3' 5' 8"B+' +J + ' 9+' D +@8' 2 3' 2 B8' " ' 9+' 2523+B 5' 7"36' 2' 42!.+' @+!+' 8"' 2!' 3+1! D+3' " ' 9+ !' 1! D 4+.+8' 92 ' 9+ !' " 5+' 4"8' B 59' " ' 8' "! . 24' B1"! 2 5+' 9+' 1!"5+88' " ' .!23 2E' " ' @28' " ' " 46' B23+' B"!+' 8 ! .+ ' 28' !+C .2!3+3' 9+' B+8' " ' S 1!"5++3 .T' !"B' B2 ! C 5 42 " ' "' +259' 8 78+R + ' 8 2.+' " ' 9+' 252C 3+B 5' 52!++!' 7 ' 9+' !+R !+B+ ' " ' 2A .' 2' 8"4+B ' "2 9' " ' +259' 8 59' "5528 " ' 8+!D+3' "' !+ 3+!' 9+' 5+!+B" 6' 2 +!@2!38' A "@ ' 28' S 8 785! 1 " T' 2' 1"@+! 4' @+21" ' ' 9+' 288+!C " ' " ' 2' 81 ! 24' 2 9"! 6' "@ .' "' 9+' +!!"!8' @ 9' @9 59' 9+' . 4 ' " ' 1+!- !6' @28' ' 9"8+' 3268' D+8 +3

9+' "!+B"8 ' 1!"B" +!' " ' 9+' +@' 2 +8' @28' :"9 ' 9 . ' B28 +!' " ' ! 6' "44+.+' M$P&OE$POOG' @9"8+' 8+!D 5+8' @+!+' !+5". I+3' 76' 9 8' 1!"B" " ' ' $HP>;' "' 9+' ! B256' " ' 2 E

76' 9+' !++3' 2 3' ! 54+8' "' 9+' 9 !59' 7 ' 248"' "' 9+' !+5". "' "' 2' 5+! 2 '.+ +46' !+4 . " 8' +4+B+ ' '19 4"8"19 5' +259 .' 1! "!' "' 9+' 9! 8 2 ' +!2' M8++' ' 5" +5 " ' @ 9' 9 8' 8 7-+5 ' 94+!' 0) ' 1' '3 ;' ' '. (' A) ' 1' +@' "!A' $<#<G' ?'2 !25 +3' "' 8+4' "' 8B244' 2 + " ' 7" 9' 2' 9+' D+!8 6' 2 3' 27!"23' 2 3' 5" +8' 8 44' "' + .2.+' 9+' " 5+' "' D+8 .2 "!8' ' 9+' 82B+' +43' 9 +'2B" .' 8' +259+!8' @28' 9 595" +' !"D"8' "' .L8 "44+.+' M$&==E$&&#G' 2B" 8' 7" 9' 28' 2' "!' 2 3' 2' 1!+259+!' 7 ' +81+5 2446' 3 8 . 89+3' 76' 9+' 52 9"4 5' 81 ! '2 3'+ 4 .9 + +3'- 3.B+ ' @9 59' 592!25 +! I+' 9 8' 5+4+7!2 +3' 1 ?'2' 5"44+5 " ' "' 1!+. 2 ' +!2 5+8' ?' 9+' " 5"B+' "' 9 8' "78+!D2 " 8' "' 8"B+' "' 9+' B"" ' R +8 " 8' "' 9 8' 326' 2 3' +81+5 2446' "' 5+! 2 ' 281+5 8' "' 2B7! 3.+' 4 +' 2 3' 9" .9 ?'8 ' "' !+R + 46' R " +3' 2 3' B"!+' 12! 5 42!46' 9+' 219"! 8B' @9+!+ ' 9+' 288+! 8' 92 ' 9+!+' 8' " 9 .' B"!+' 2 !24' "' !+4 . " ' 92 '5" + " 8' 27" ' ' 9 595" +' 3++3 ' B26' 7+' 7+8 ' 3+85! 7+3' 28' 9+' "5!2 +8' "' 9 8' +@' 19 4"8"196' 9+' 1 74 89+3' " 9 .' @9 4+' 2 ' 9! 8 L8' "44+.+' @9 59' 7+52B+' 9+' 5+ +!' "' 9+' B"D+B+ ' ?'28' "! . 2 .' 12! 46' ' 9+' +259 .' "' :"8+19' +3+' 2' 2B" 8' +259+!' "' 92 ' 8"5 + 6' ?' 3@"! 9' 9+' B28 +!' M$&P=E' $&>>G' 2 3' + !6' "!+' 2' +44"@' @+!+' D"4 B C " 8' @! +!8' 9+!' " 274+' B+B7+!8' @+!+' +"!.+' 8 ' :"9 ' B 9' 2 3' 2 92 +4' 4E' D+!@+4' M244' 9!++' 3 8 . 89+3' 28' 2 9"!8G' 2 3' :"9 ' "! 9 . " ' M 9+' B28 +!' " ' :+8 8' "44+.+G' @9"' 3+! ""A' 9+' 427"!' " ' +3 .' +3+L8' @"!A8 9+' 2B7! 3.+' 42 " 8 8' @+!+' 76' "' B+2 8' !++' !"B' 9+' 5!+3 4 6' 9+' 8 1+!8 " ' 2 3' 9+' B68 5 8B' " ' 9+ !' 2.+' 7 ' 2' 9+' 82B+' B+' 9+6' !"8+' 5" 8 3+!2746' 27"D+' 9+' 2D+!2.+' 8 2 32!3' " ' 7" 9' 7+4 +' 2 3' 8+ B+ ' 2 3' @+!+' 9+B8+4D+8' +3' 76' " +' 5"B B" ' 5" C D 5 " ' @9 59' B26' 7+' 3+85! 7+3' 28' 9+' A+6C " +' " ' 9+ !' 3 85" !8+' 92 ' 9+' 2 B8' " ' !+4 . " ' 2 3' 19 4"8"196' 7+ .' 24 A+' 3 !+5 +3' "@2!3' 9+' 2 2 B+ ' " ' ! 9' ' @28' BC 1"88 74+' "'7+4 +D+' 92 ' 9+' !+8 4 8' "'+259'@" 43' " ' 4 B2 +46' 7+' " 3' ' 92!B" 6' 9 8' 7+4 +' ' @28' 92 '4+3' 9+B' "' 4""A' @ 9' 86BC 12 96' " ' 9+' ! 8+' " ' 9+' "624' "5 + 6' #:" "&1' @9 59' W 28' !+.2!3+3' @ 9' "' 4 4+' 211!+9+ 8 " ' 76' B2 6' " ' 9+' 3+ + 3+!8' " ' "! 9"3"J6' 9+' 8"5 + 6' 24 9" .9' ' ""A' 8' ! 8+' 2' J "!3' 54 3+3' !"B' 9+' !8' 2' 5" 8 3+!274+' 2BC 7! 3.+' +4+B+ '!+1!+8+ +3' 76' 9+' 2B+8' " ' + 9' 2!3-' 24 +!' "1+' :"9 ' +44' 2@!+ 5+' ""A+' 44 2B' !"" +' 2 3' + !6' "@+!' 6' 9+' 9 !59' " ' 9+' " 9+!' 92 3' 9+' 42C " 8 8' @+!+' 2 ' !8' .42346' 92 4+3' 28' D ! 24' 592B1 " 8' " ' 8' 52 8+!' 2 3' ' + !6' "!+' +81+5 2446' 3 8 . 89+3' 9 B8+4' 76' 9+' 27 4 6' @ 9' @9 59' 9+' +J1"8+3' 9+' 1!+D2 4 .' + 3+ 56' "' @92 ' @28' 9+ ' A "@ ' 28' S' + 9 8 28B T' "!' 9+' ! .9 ' "' !+8 !2 +3' 1! D2 +' - 3.B+ ' 9+' + 5 2 " ' 2 3' 3+542!2 " ' " ' !+4 . " 8 7+4 + ' 9+' B 4 14 52 " ' " ' 8+5 8' 3 ! .' 9+' "B B" @+24 9' 923' ' 25 ' 7++ ' 255"B 12 +3' 76' 8"' B 59' 32 .+!" 8' 81+5 42 " ' @ 9' !+.2!3' "' 9+' !+42 " 8' " ' 9 !59' 2 3' 2 +' 2 3' 248"' 76' 8 59' 8@++1 .' 1!"-+5 8' " ' !+ "!B' ?' 54 3C .' ' 8' "' 7+' " +3' 9+' 27"4 " ' " ' 9+' C D+!8 +8' 9+B8+4D+8' ?' 92 ' "!+' 9+!+' " 3' 9 B8+4 ' 86B12 96' @ 9' 9+' .!+2' B2-"! 6' " ' +3 52 +3' 3 D +8' 9!" .9" ' 9+' !+24B' 3' 3"@ ' "' 9+' B+' " 92!4+8' B+" ' M$0P<E' $>;&G 9+' @"!3' S' + 9 8 28B' T' 7+52B+' 2' 5 8C "B 2!6' +J1!+88 " ' @ 9' 9"8+' @9"' 9+43' ' "' 7+' 9+ !' 3 6' "' 3 85" !2.+' 2 ' 2 +B1 8' "' +8 274 89' 9+"! +8' " ' 9+"4".6' 28' 2' 1!".!+88 D+' 85 + 5+' "!' " ' 59 !59' 9 8 "!6' 28' 23B .' " ' 2' B"3+' " ' !+2 B+ ' @9+!+76' ' B .9 ' 7+' !+ C 3+!+3' 8 85+1 74+' " ' 44 8 !2 " ' 76' 9+' 8 36' " ' 9+' 9 8 "!6' " ' " 9+!' !+4 . " 8' 2 3' 9+' 9! 8C 2 ' 7+4 +' 8+4 ' 9 8' !+5+ D+' B"!+' 23+R 2 +' 2114 52 " ' 28' 2' ! 4+' " ' 3 D 3 24' 7+4 +' 2 3' 1!25 5+' S' +4 . " T' 82 3' :"9 ' B 9 ' " +' " ' 9+' 274+8 ' " ' 9+' 42 " 8 8' S' 9" .9' ' 92 9' 8' 2 56' 6+ ' ' 92 9' "' "43' 2.+ T ' 9+' " 9+!' 92 3' 8 59' @"!A8' 28' +2!8" ' ' ' M$&&&Q' 2 3' 44" 8" L8') ' (' 2 ' M$&&&G' 9+' 42 +!' @! + ' 2.2 8' "B2 ' 2 9"4 5 8B' @+!+' 3+8 . +3' "' 3+ +' 2 3' "' 2' 5+! 2 ' +J + ' 8 +!+" 61+' 9+' " 4 +8' " ' "! 9"C 3" J' 7+4 + ' ?' 9+' 8 11!+88 " ' " ' S' 88+ 'T' 2 3' " ' 2 9"4 5 8B' 24 A+' 92D .' "@' 7+5"B+' 2' 1! B2!6' "7-+5 ' @ 9' 9+' 9 !59' ' !+42 " ' "' 9+' "!B+!' 3++3' 9+' + "! 8' " ' 9+' 54+!.6' @+!+' 2 + 3+3' @ 9' 8"' B 59' 8 55+88' 92 ' 8"B+' 12! 8' " ' 9+' 5" !6' 9+' S' B++ .' 9" 8+' T' 24B "8' 3 8211+2!+3' ' $&>$' 9+' D+!8 6' ' 2 ' 233!+88' 1!+8+ +3' "' .' 92!4+8' 2' +@B2!A+ ' B23+' "!B 24' 3+542!2 " ' " ' 9+' 9+"!6' 92 ' 9+' .'3+! D+3' 9 8' 4+' " ' !"B' 9+' 1+"14+' 7 ' !"B' "3' S' 76' 32B 24' 9+!+3 2!6' ! .9 ' " ' 8 55+88 " T' 2 3' @9+ ' +' 6+2!8' 42 +!' 2' 42!.+' 7"36' " ' 1 85"124 2 ' 3 D +8' 9!" .9" ' 9+' 5" !6' !+ 8+3' "' D "42 +' 9+' "2 9' 92 ' 9+6' 923' 2A+ ' "' :2B+8' ' 76' 8@+2! .' 244+. 2 5+' "' 44 2B' 2 3' 2!6' 2' !+89' 8" !5+' " ' 5" + " ' 2 3' 3 8 " ' @28' 5!+2 +3' ' 9+' D+!8 6' ' ' :"9 L8' "4C 4+.+' "' 4+88' 92 ' Q#' " ' 9+' +44"@8' @+!+' 4 C B2 +46' +-+5 +3' 28' " - !"!8' 2B" .' @9"B' @28' 9" B28' 2A+!' 9+' 2 R 2!6' M$&P&E' $0=#G' @9"' 5" +3' " @ 98 2 3 .' "' !+8 3+' ' 5"44+.+' 9 8' 9 .9' 592!25 +!' 2 3' +B + ' 8+!D 5+8' "' 4+2! .' 14+23 .' + +5 2446' ' 9 8' 2D"!' ! .' 9 8' 4 + B+' 9+' 1!+8+ +3' Q;' D"4 B+8' " ' 9 8' B2 85! 1' 5"44+5 " 8' "' 2!C 4+6' 2!4' " ' J "!3' @9 59' 2!+' 54 3+3' ' 9+' 2!4+ 2 ' 5"44+5 " ' "@' 1!+8+!D+3' ' 9+' ! 89' 8+ B' + .9 ++ ' " 9+!8' @+!+' 7+C R +2 9+3' 76' 9 B' "' 9+' D+!8 6' 4 7!2!6' 2B7! 3.+' 2 3' 9+' @9"4+' 8+! +8' 8' " ' 9+' 9 .9+8 ' D24 +' ' !+42 " ' "' 9+' 9 8 "!6' " ' 9+' C D+!8 6' 2 3' 9+' 5"44+.+8' 2 ' 42!.+' 8' / ' (' ' "A ' 1' +3 +3' 76' 9+' +D' !" +88"! : ' ' ' 26"!' MQ' D"48 ' $>&<G' 8' +81+5 2446' "' 7+' !+5" B B+ 3+3' "' 244' 8 3+ 8' " ' 9+' 4 +!2 !+' !+42 .' "' 4+2! .' 2 3' +3 52 " ' R' .42 3

4 9" .9' 2' 5+! 2 ' 81 ! ' " ' 3 D 3 24 8+4 E 288+! " ' 2 3' 3+1+ 3+ 5+' 5" +3' "' B2 C +8 ' 8+4 ' ' 2B7! 3.+' 2 3' 9 8 /" ' 9+' 8 55+88"!' " ' +@ " ' ' 9+' 528 2 ' 1!" +8C 8"!89 1' M$O#QE$O$#G' 2 3' " 6+!8' 334+ " ' + 4+6L8' 4+23 .' 2882 42 ' 2 ' ! 6' "44+.+' @9"' !"B' OQ' "' $OP# 44+3' 9+' " 4 5+' " ' $ ' . . % 13'@+!+'3 8 . 89+3' 76' 9+'7"43C +88' @ 9' @9 59' 9+6' 2882 4+3' 9+' !23 " 8' " ' !+4 . " 8' 7+4 + ' 2 +!' 9+' 255+88 " ' " ' 9+' 2 "D+! 2 ' 36 28 6' 9+' 5" !"D+!8 24 81 ! ' "' 2' .!+2 ' +J + ' 3 +3' " F 2 3' 9!" .9" ' 9+' 2 " ' 2 ' 42!.+' 28' @+44' 28' ' 9+' D+!8 +8 ' 9+' 8 36' " ' 9+"4".6' 8+4 ' 5+28+3' "' 2 !25 ' 9+'82B+'2 + " ' S 2 3 2! 2 8B T'8268' +5A6 ' S 923' 81!+23' @ 3+46 ' 7 '24B"8 ' 8 4+ 46' ' 9!" .9' 24' !+4 . " 8' 7")+8 ' 2 3' 3". B2 5' +259 .' @28' 24B"8 ' +J54 3+3' !"B' 9+' 1 41 T' " +8R + ' 3++3' " ' 9 8' D+!6' 255" ' 5"B B+ 3+3' 9+' .4 89' 9 !59' " ' 9 8' B+' 28' 2 ' 8 " ' S' 92 ' @28' 3 D+8 +3' " ' 8"B+'" ' 8' @"!8 ' 1!+- 3 5+8' 2 3' @28' 9+'8" !5+' " ' B2 6' 1!25 524' 23D2 2.+8 T' ' @28' " ' 8 !1! 8 . ' 9+!+ "!+' 92 ' 2 ' 212 96' @9 59' 1+!D23+3' 9+' 2 " '89" 43' 92D+'+J + 3+3' "' 9+' D+!8 +8 ' 9+' B+2 B+' 9+'.+ 8' " ' + 4+6 ' @9"' 923' 8 55++3+3' "' 9+' B28 +!89 1' " ' ! 6' "44+.+' ' $0##' 2 3' 92 ' " ' 8225' 2!!"@' 2 3' " ' 8225' +@ " ' 8+!D+3' "' 8 8 2 ' 9+' !+1 2 " ' " ' 2B7! 3.+' 28' 2' 8+2 ' " ' +J25 ' 4+2! .' 2 3' 85 + 5' !+8+2!59 ' ' 9+' B+' " ' +@ " ' 2 3' 9 8' 859"'"4' 9+' 81+5 24' 592!25 +! 8 5' " ' 2B7! 3.+' B2 9+B2 58' @28' 8' 2114 52 " ' "' 28 !" "B6' 2 3' 1968 524' 1!"7C 4+B8 ' 2 3' ' 9+' 42 +!' " 2746' "' 9+' 9+"!6' " '4 .9 ' ' $0=0' 9+' !8 ' +J2B 2 " ' "!' 9+' 2 9+B2 524' ! 1"8' @28' 9+43 ' 2 3' "55 1 +3' 2 ' !8 ' " 46' @"' 2 3' 2 924 ' 3268' @9 4+' 9!" .9C " ' 9+' 42 +!' 924 ' " ' 9+' + .9 ++ 9' 5+ !6' 9+' 8 36' 8+4 ' B23+' 4 4+' 23D2 5+' ' $>;&' 9"@+D+!' 9+' +J2B 2 " ' @28' 1!"4" .+3' "' &' 3268 ' 2 3' 8 78+R + 46' "' > ' 9+' +!+8 ' ' "@' +J5 +3' D+8 +3' B2 9+B2 58' @ 9' 2 ' B1"! 2 5+' @9 59' 52 " ' 7 ' 7+' !+.2!3+3' 28' +J5+88 D+' ' 7+ .' !+R !+3' 92 ' +D+ ' 52 3 C 32 +8' "!' 54288 5)' 9" "!8' 89" 43' 1!+D " 846' 92D+' "7 2 +3' 9+' 4 A+' 3 8 5 " ' ' B2 9+C B2 58 ' ? ' 9+@+44' 9 B8+4 ' 3+ + 3 .' 9 8' !+C R !+B+ ' " ' 9+' .!" 3' 92 ' 9+' 42 +!' 8 36' @28' S' 9+' 1! 5 124' B+2 8' ' 9+' 5 4 D2 " ' " ' 9+' !+28" .' 25 4 6 T' ' 9+' " 9+!' 92 3 ' 32B' +3.@ 5A' 2 3' ! 44 2B' 2B 4 " ' MZ a G' .2D+' 2 '"1 " ' 2D"!274+' "' 9+' B2 C + 2 5+' " ' 9+' !+8 ! 5 " ' 9+!+76' 1425+3' " ' 54288 524' 8 3 +8 ' 2 3' ' $>P# ' @28' 27"4 89+3F 2 3' 8 5+' $>>P' !+ 59' "!' +! B2 ' 92D+' 7++ ' 23B +3' 28' 24 +! 2 D+8' ' @92 ' 8' A "@ ' 28' 9+' S' !+D " 8' >' "!' 8 B14+' 1288' +J2B 2 " ' ' 9+' ! 1"8' 8+4 ' B"!+"D+!' 592 .+8' 2 3

H '" 44++' 5!+2 +3' " ' 9+' "5528 " ' " ' 9+' 1!+8+ 2 " ' " ' 9+' B2. 5+ ' 4 7!2!6' " ' ""!+' 89"1' " ' 46' "' 9+' BD+!8 6' 76' +"!.+' 9+' !8 ' 0&F 28' 9 8' 5"44+5 " ' 28' ' 8+4 ' B"!+' 92 ' 3" 74+' 9+' 9+ ' +J 8 .' D+!8 64 7!2!6 ' 2 " 9+!'" 5+!'@28'211" +3' "' 1!"D 3+' "!' 8'23+R 2 +' 8 !D+ 442 5+

B"3 52 " 8' 92D+' 7++ ' !"3 5+3F 2 3' ' $<#&' ' @28' .+ +!2446' 23B +3' 92 ' 9+' 868 +B' ' "!5+' @28' 82 8 25 "!6 ' 92 ' 9+' 8 7-+5 8' " ' 23D2 5+3' 8 36' @+!+' " ' 8 274+' "!' 5" BC 1+ D+' +J2B 2 " 8' 2 3' 92 ' ' @28' 3+8 !C 274+' "' . D+' 25 4 +8' "' 8 3+ 8' "!' !8 ' 1288 .' 9!" .9' 2' D ."!" 8' 5" !8+' " ' a 9+' 7!"23' 1! 5 14+8' " ' B2 9+B2 58 ' 2 3' 9+ ' 1288 .' 2 ' +J2B 2 " ' ' 9+' 82B+' ? '2 +!' @9 59' 9+6' B .9 ' 3+D" +' 9+B8+4D+8' "' 81+5 24' 3+12! B+ 8' ' B2 9+B2 58 ' "!' "' +@' 8 7C -+5 8' 8 59' 28' 1968 58 ' + . ++! .' 2 3a' " 9+!' 7!2 59+8' " ' 85 + 5+' D+ 2446' 9+' ! 1"8' 8+4 ' @28' !+B"3+4+3' "!' @92 ' @28' +88+ 2446' 2' +@' 868 +B ' 9+' "!3+!' " ' B+! ' ' +259' 3 D C 8 " ' 7+ .' 27"4 89+3 ' 2 3' 52 3 32 +8' 7+ .' 244"@+3' "' 2A+' 9+' +J2B 2 " ' 28' +2!46' 28' 9+' 8+5" 3' +! B' " ' !+8 3+ 5+' 24 9" .9' " ' 9+!+76' "7 2 .' 2' 3+.!++' 9!" .9" ' 9+' .!+2 +!' 12!' " ' 9+' + ++ 9' 5+ !6' "' 9+' 1!+8+ ' B+' 9+' 2B7! 3.+' 859"'"4' 928' + -"6+3' 2' @ 3+' 2 3' @+44E3+8+!D+3' !+1 2 " ' 23"! +3' 28' 928' 7++ ' ' B2 9+B2 524' 1968 58' 76' 9+' 2B+8' " ' ! +"!.+' "A+8 ' "!3' +4D ' !" +88"!' 4+!AE 2J@+44 ' "!3' 2;3+ .9' !' :' :' 9"B8" ' 2 3' ! :"8+19' 2!B"!' ?' ' 28 !" "B6' 76' !" +88"!' 32B8' 2 3' ! +"!.+' 2!@ ' ?' ' 1 !+' B2 9+B2 58' 76' !" +88"!8' 264+6' 2 3' 64D+8 +!' ' 9+' 428 E' 2B+3' 7!2 59' ' 928' 25R !+3' .!+2 46' 5!+28+3' D ."!' @ 9 ' 9+' 428 ' @+ 6' 6+2!8' 3+!' 9+' +259 .' " ' !" +88"!8' "!86 9' 2 3' "78" ' 2 3' ! 2A+!

8' +2!46' 28' $>$P' +J2B 2 " 8' @+!+' 9+43' "!' 9+' 5 D 4' 42@' 54288+8' 7 ' @+!+' 4 B +3' "' 2' B"3 5 B' " ' "B2 ' 42@' 9' 9+' 8 " ' " ' 9+' "@ .' !" +88"!89 1' " ' 9+' 2@8' " ' .42 3' 9"@+D+!F !+. 42 " 8' "!' 9+' 5 ' ' 2@' @+!+' 3!2@ ' 1' 2 3' 9+' 3+.!++' " ' 28 +!' " ' 2@8' 8 +3 L' 2 3' 9+' !8 ' 2@' ! 1"8' 4 8 ' @28' 1 74 89+3 ' +B1"!2! 46' B+!.+3' ' $>&>' ' 2' 2@' 2 3' 8 "!6' ! 1"8 ' 9 8' +JC 2B 2 " ' @28' 2.2 ' !+5" 8 +3' ' $>0;' 28' 92 ' " ' 9+' 2@' ! 1"8' " 46 ' ? ' 9+' 8 "! 524' ! 1"8' 7+ .' 8 2! +3' 28' 2' 8+12!2 +' +J2B 2C " ' ' $>## "@ .' "44+.+' !+5+ D+3' 8' 592! +!' 28' 3+8 . +3' "!' 8 3+ 8L' ' S' 42@' 1968 5 ' 2 3' " 9+!' 8+ 4' 2! 8' ' 4+2! .' T F 7 ' 2 ' 9+' 1!+8+ ' B+' 9+' +J2B 2 " ' "!' B "!' 859"42!89 18' 8' !+8 ! 5 +3' "' B2 9+B2 58 ' 42@' 9 8 "!6 ' 2 3' 2 !24' 85 + 5+' 9+' 3 C 5 4 6' 1!+8+ +3' ' 5" +5 " ' @ 9' 9+' +@' ! 1"8+8' " ' 23+R 2 +46' !+5". I .' " ' " 46' 9+ !' 5!+28 .' 4 +!2 !+' 7 ' 248"' 9+ !' !+42E' " 8' "' 8 ! 5 46' 5". 2 +' +438' " ' !+8+2!59' .!23 2446' 7!" .9 ' 9"B+' 24 A+' "' +259+!8' 2 3

H "@ ' "' $P;P' 9+' +!B' (() ' 3+ " +3' 9+' "B2 ' "!' D 4' 2@' 28' 3 8 . 89+3' !"B' 2 " ' 2@' 3+.!++8' 2 ' 92 ' B+' 7+ .' . D+ ' '7" 9F 7 ' !"B' $P;P' "' $>&=' 24 9" .9' 9+' 14 !24' @28' !+ 2 +3' ' 3+ " +3' " 46' 9+' "B2 ' 2@' 28' 9+' 8"4+' 8 7-+5 ' " ' 4+.24' 3+.!++8 ' 2' 82.+' 3+ + 3+3' 76' !' + !6' 2 +' " ' 9+' .!" 3' 92 ' 9+' 14 !2' ' 8' ' 25 ' +R D24+ ' "' 9+' 8 . 42!?) ' M ' @9 59' 9+' 2B7! 3.+' 3+.!++' 8' 5" +!!+3G' 2 3' 9 8' 5"D+!8' 244' 9+' 42@' @9 59' B 26' 7+' 8 3 +3' ' 9+' D+!C 8 6 ' "!' 2 6' 12! ' " '

+J2B +!8' 9+' +5+88 6' " ' 3 D 3 .' 9+' ! 1"8' 8+4 ' "' @"' 12! 8 ' 8 59' 12! 8' 7+ .' 3 8 5 ' !"B' +259' " 9+!/2 3' 92D .'3 +!+ '+J2B +!8 ' ' $>>$' 9+' 4288 524' ! 1"8' M@9 59' 32 +3' !"B' $>Q=G @28' 9 8' 3 D 3+3 ' ? ' 9+' !8 ' 2! ' !+1!+8+ .' 9+' "! . 24' +J2B 2 " F 9+' +5" 3 ' 9+' 5". 2 +' 8 7-+5 8' " ' 4 +!2 !+' 2 5 + ' 19 4"8"196 ' 9 8 "!6 ' 2!592+"4".6 ' 2 3' 42 . 2.+' M" ' @9 59' " 46' @"' 5" 43' 7+' 2A+ G ' ' 9+' !8 ' 2! ' 5"B1"8 " ' ' 2 ' 2 3' !++A' 1!"8+' 2 3' D+!8+' 5" +3 ' 28' 7+ "!+ ' "' 7+' "74 .2 "!6 ' 2 3' 9+' 52 3 32 +' @9"' 1288+3' 9+' +J2B 2 " ' @28' 9+!+76' R 24 +3' "!' 2 ' 9" "!' 3+.!++' ' 9+' 82B+' B+' ' @28' 3+C 542!+3' 1+!B 88 74+' "!' 9"8+' @9"' 923' 1288+3' ' 9+' !8 ' 2! ' " ' 8"B+' " 9+!' ! 1"8' "' 2A+' 9+' +5" 3' 2! ' " ' 9+' 4288 524' ! 1"8' 2 3' ' 9 8' B2 +!' 52 3 32 +8' " ' 1"88+88 .' 9+' !+R !+3' 5"B1+ + 56' ' 5"B1"8 " ' @+!+' + C 274+3' "' "7 2 ' !+5". " ' " ' 9+ !' 2 2 B+ 8' ' 2 6' @"' " ' 9+' D+' 27"D+E 2B+3' 8+5 " 8 ' 9 8 ' 24 9" .9' ' 9+' "1 " ' " ' B2 6' 9+!+' 8' !+28" ' "' 211!+9+ 3' 2' 3+54 +' ' +J25 ' 859"42!C 89 1 ' 9+' !+5". I+3' 2!+2' " ' 54288 524' 4+2! .' 928' 3" 7 +346' !+5+ D+3' 5" 8 3+!274+' +J + C 8 " ' 2 3' 8' 4 6' ' !+42 " ' "' 9+' 9 8 "!6 " ' 9+' 128 ' 928' 7++ ' 5"!!+81" 3 .46' 5!+28+3 9+' "!24' 5 + 5+8' ! 1"8 ' 8 +3' ' $>P$ ' B2 46' 9!" .9' 9+' + "! 8' " ' ! ' 9+@+44 ' 928' 8 B 42!46' 3+!." +' B2 +! 24' 24 +!2 " ' ! . 2446 ' 4 A+' 9+' 2@' ! 1"8 ' ' 5"!1"!2 +3' 8 7-+5 8' !"B' @9 59' ' 928' 8 5+' 7++ ' 3 88"C 5 2 +3 ' ? ' 92 ' " ' 2 5 + ' 19 4"8"196 ' @9 59' "@' 7+4" .8' "' 9+' 4288 524' ! 1"8 ' 2 3' 92 ' " ' 1"4 524' +5" "B6 ' @9 59' @28' !2 8 +!!+3' ' $<#P' "' 9+' 5" "B 58' ! 1"8 ' ' 9+' " 9+!' 92 3 ' 9+' 5!+2 " ' " ' 2' 4+5 !+89 1' ' 4". 5' M$>>=G ' " ' 2' 1!" +88"!89 1' " ' B+ 24' 19 4"8"196' 2 3' 4". 5' M$><OG ' 2 3' " ' 2' 4+5 !+89 1' ' +JC 1+! B+ 24' 18659"4".6 ' 92D+' 2 "!3+3' ! 9+!' 25 4 +8' "!' 8 B 42!' "!' 5". 2 +' 8 3 +8 ' ' $<#Q' 2' B"!24' 85 + 5+' 4+5 !+89 1' @28' " 3+3' ' B+B"!6' " ' 9+' 42 +' !" +88"!' + !6' 3.E' @ 5A ' 2' 3 8 . 89+3' 7+ + 25 "!' "' 9+' C D+!8 6' ' " ' 2' +@' !+42 " 8' ' 9+' 1!+8+ ' B+' 9+' + 5" !2.+B+ ' 9+43' " '76' 9+' 5"44+.+8' "' 9+' 8 36' B26' 7+' !+.2!3+3' 28' 23+R 2 +' @9 4+' 9+' 8 2 32!3' " ' +J2B 2 " ' 8' C 3" 7 +346' 9 .9 ' 3' 24 9" .9' 9+' B7+!' " ' 8 3+ 8' 8' 8B244 ' 9+' B7+!' " ' 1!" +88"!8' " ' 19 4"8"196' 2 ' 1!+8+ ' 9"43 .' 592 !8' ' 9+' +3' .3"B ' @9"' 92D+' !+5+ D+3' 9+ !' +3 C 52 " ' ' 2B7! 3.+' 8' 2 ' 4+28 ' +R 24' "' 92 ' " ' 9"8+' @9"' 92D+' 7++ ' +3 52 +3' 2 ' J "!3 9+' !+5". " ' +J + 3+3' "' 9 8 "!6' 928' A+1 ' 125+' @ 9' 9+' .!+2 ' 3+D+4"1B+ ' " ' 9+' 5" 5+1 " ' 2 3' 4 +!2 !+' " ' 9+' 8 7-+5 ' 3 ! .' 9+' 428 ' ;# 6+2!8 ' 88"5 2 +3' ' 9+' !8 ' 8 2 5+' 28' 2' ! 1"8' 8 7-+5 ' @ 9' 2@' ' @28' !+.2!3+3' 28' 5" 5+! +3' 59 + 46' @ 9' 8 C " 8' 2 3' @ 9' +J 7""A8' 8 59' 28' 2 I' " ' " .+ ' 778 ' !++B2 ' 2 3' !' + !6' 2 +' ' $>OP ' 9"@+D+!' 28' 9+' !+8 4 ' " ' 2' 8+! +8' " ' 3 85 88 " 8' 1!+8 3+3' "D+!' 76' 9+' 42 +' + !6' 3.@ 5A ' 9+' 8 36' @28' 1425+3' " ' 2 3+1+ 3+ ' "" .F 2 3' 8 5+' 92 ' B+' 8' +J12 8 1 ' 7" 9' 28' !+.2!38' 9+' B7+!' " ' 8 C 3+ 8' 2 3' D2! + 6' " ' 8 3 +8 ' 928' 7++ ' !+B 2!AC 274+' 2 3' ' @28' " 3' +5+882!6' "' 3 D 3+' 9+' ! 1"8' "' @"' 12! 8 ' ' $<#>E$<#<' 9+' BC 7+!' " ' 9"8+' @9"' 1288+3' 9+' +J2B 2 " ' 923' ! 8+ ' "' << B+ ' 2 3' < @"B+ ' M!+81+5 D+46G ' ' 2! ' F 2 3' "' OQ B+ ' 2 3' > @"B+ ' ' 2! ' 9+' 5" ! 7 " 8' 8 78+R + 46' B23+' "' 9 8 "! 524' 859"42!89 1' 2 3' 4+2! .' 76' " ' 2' +@' " ' 9"8+' @9"' 92D+' 9 8' 25R !+3' 3 8 5C " ' 2 3' 9+' B2 +!' ' @9 59' 8"B+ ' 7" 9' 76' 1!"B 8+' 2 3' 1+! "!B2 5+ ' 92D+' 25R +3' 9+BC 8+4D+8' ' .4 89' 1 74 5' +' 8' 248"' " +@"! 96' 28' +D 3+ 5+' " ' 9+' D24 +' " ' 9+ !' !2 . ' ' 8' ' 9 8' 5" +5 " ' 3++3 ' 92 ' 8"B+' 3 +!C + 5+' " ' "1 " ' 928' B2 +8 +3' 8+4 ' @ 9' !+C .2!3' "' 9+' B"" ' R +8 " ' " ' 9+' +J + ' "' @9 59' 2' D+!8 6' B26 ' @ 9' 23D2 2.+ ' 23- 8 ' 8' !2 .' 8"' 28' "' !+ 3+!' ' 3 !+5 46' 1!+12!2C "!6' "!' 2' 1!" +88 " F 2 3' 8"B+' +J5+1 " ' 928' 7++ ' 2A+ ' "' 9+' 7 28' B12! +3' 76' 9+' 42 +' !':"9 ' ++4+6' M +. 8' !" +88"!' $>&<E$><PG ' "' 9 8' .+ +!2446' 23B !274+' +259 . ' 28' 5245 C 42 +3' "' 5!+2 +' 2' 859""4' !2 9+!' "!' 9+' !2 .' " ' 8 2 +8B+ ' 2 3' 1 74 5' " 5 248' 92 ' "!' 8 C 3+ 8' 1!"1"8 .' "' 3+D" +' 9+ !' + +!. +8' "' 1!"4" .+3' "! . 24' !+8+2!59 ' 59' 2' + 3+ 56 ' 9"@+D+!' 928' 7++ ' 12! 2446' !+5 +3' 76' 9+' !+4+.2 " ' "1"4 524' 85 + 5+' 1"4 524' +5" "B6 ' 2 3' +! 2 " 24' 42@' "' 2! ' ' " ' 9+' ! 1"8F' 24 9" .9' 2' 6+ ' B"!+' !+5+ "D2 " ' @9+!+76' .+ +!24' B "3+!' / 9 8 "!6' 928' 7++ ' 8 B 42!46' 3+ +!!+3 ' B26' 7+' !+.2!3+3' 28' 2 ' 4+28 ' R +8 " 274+' 8++ .' 92 ' ' .42 3' ' 8' " ' " + ' 92 ' 2 6' 1 74 5' 859""47"6' 5"B+8' 1' "' 9+' D+!8 6' 1"88+88 .' 4 A+' 2' +!B2 ' .) 1' 2' 2 !' A "@4+3.+' " ' 9+' " 4 +8' " ' " 46' " ' B"3+! ' 7 ' 248"' " ' 2 5 + ' 2 3' B+3 +D24 ' 9 8 "!6 ' 9+' !"3 5 " ' " ' +88268' ' 7" 9' 12! 8' " ' 9+' ! 1"8' 211+2!8' "' 92D+' 7++ ' 2 + 3+3' @ 9' +J5+44+ ' !+8 4 8 ' 5" +5 " ' @ 9' B+3 5 +' 9+' R +8 " ' " ' 9+' 3 !+5 ' !+4+D2 56' " ' D+!8 6' 8 ! 5 " ' "' 1!" +88 " 24' 1!25 5+' "!5+8' 8+4 ' 8 44' B"!+' 1!"B + 46' " ' 9+' 2 + " ' "B+@92 ' B"!+' 92 ' 924 ' 2' 5+ !6' 2."' 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"44+8 " ' ' J "!3' 9+' 25 4 6' " ' B+3 5 +'
81!2 .' 2.2 ' "' +! 4 6'2 3'7+.2 ' "' 4" ! 89'
28'" '6"!+' ' 9+' !8 '924 '" ' 9+' + ++ 9'5+ C
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9+' 859""4' ' 2B7! 3.+' B7+!8' 8"B+' =###
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7+' B+3 5 +' "!' 2 6' " 9+!' +43' " '3 8 +!+8 +3'
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9+!+' 2!+' "!' +J2B14+' 2 ' 9+' 1!+8+ ' B+'
2B" .' 9+' $>' +J 8 .' 5"44+.+8 ' $P' 3 46' 21C
1" +3' +259+!8' " ' I "B" .6' MB "8 ' " ' 9+B' 81+C
5 24 8 8G @9"8+' 8 ! 5 " ' 8' 2D2 4274+' 76' 24'
B+B7+!8' " ' 5"44+.+8 ' ' +@ " L8 B+'
2 3' 3"@ ' "' 27" ' 9+' B 334+' " ' 9+' 428 '
5+ !6' 59+B 8 !6' @28' 9+43' "' 54 3+' 24'
7!2 59+8' " ' B"4+5 42!' 1968 58 ' 8 59' 28' 9+'
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28' .!23 2 +8' !" B' " 9+!' D+!8 +8' 2!+' 23C
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9+' 59+B 524' 427"!2 "!6' 2 "!38' 6' 9+' " C
32 " ' " ' 9+' 2D+ 3 89' !" +88"!89 1' " ' JC
1+! B+ 24' 968 58' M>0G' 9+' !" +88"!' " '
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! .' " ' 9+2 ' +4+5 ! 5 6 ' 2 3' B2. + 8B
9+' "44"@ .' + B+!2 " ' " ' 85 + 5'
592 !8' " 3+3' @ 9 ' 9+' 428 ' 924 ' 5+ !6'
B2!A8' 9+' 8 +236' 23D2 5+' " ' 9+' D+!8 6' '
9 8' 3 !+5 " F 1!" +88"!89 1' " ' I""4".6' 2 3'
5"B 12!2 D+' I""4".6' M$>&&GF B+592 8B' 2 3'
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@ 9' 9+ !' 2321 2 " ' "' B "3+! ' B+ 9"3 '
+ 4+' 9+' D+!8 6' "' 7+' 5" 8 3+!+3' 2' 1 " ++!'
' 9 8' !+81+5 ' B" .' 9+' +@46' +!+5 +3'
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')1!"1+!' 3 81426' " ' 9 8' 5344+5 " 8' 2 3' 8 59' 233 C
" 8' 28' B .9 ' 7+' B23+' "' 9+B ' @9 4+' 9+' "55 C
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5" B B" ' ' 5+ !6' 42 +!' 9+' .!+2 ' 5" !"C
D+!86' 7+ @++ ' 9+' +! +! 2 ' 2 3' " 2 '
859""48' 8+ ' B+ ' "78+!D .' 2 3' 5"44+5 .' @ 9'
!+ +@+3'+ +!.6' 7 '24 9" .9' D24 274+' B2 +! 24'
@28' 233+3' "' 9+' ""3@2!3 2 ' 8+ B ' 4 4+'
@28' 3" +' ' 9+' @26' " ' !+8+2!59' 4' 9+' B+'
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8"!89 1' 428 +3' !" B' $>$>' "' $>0;' 2 3' @9"'
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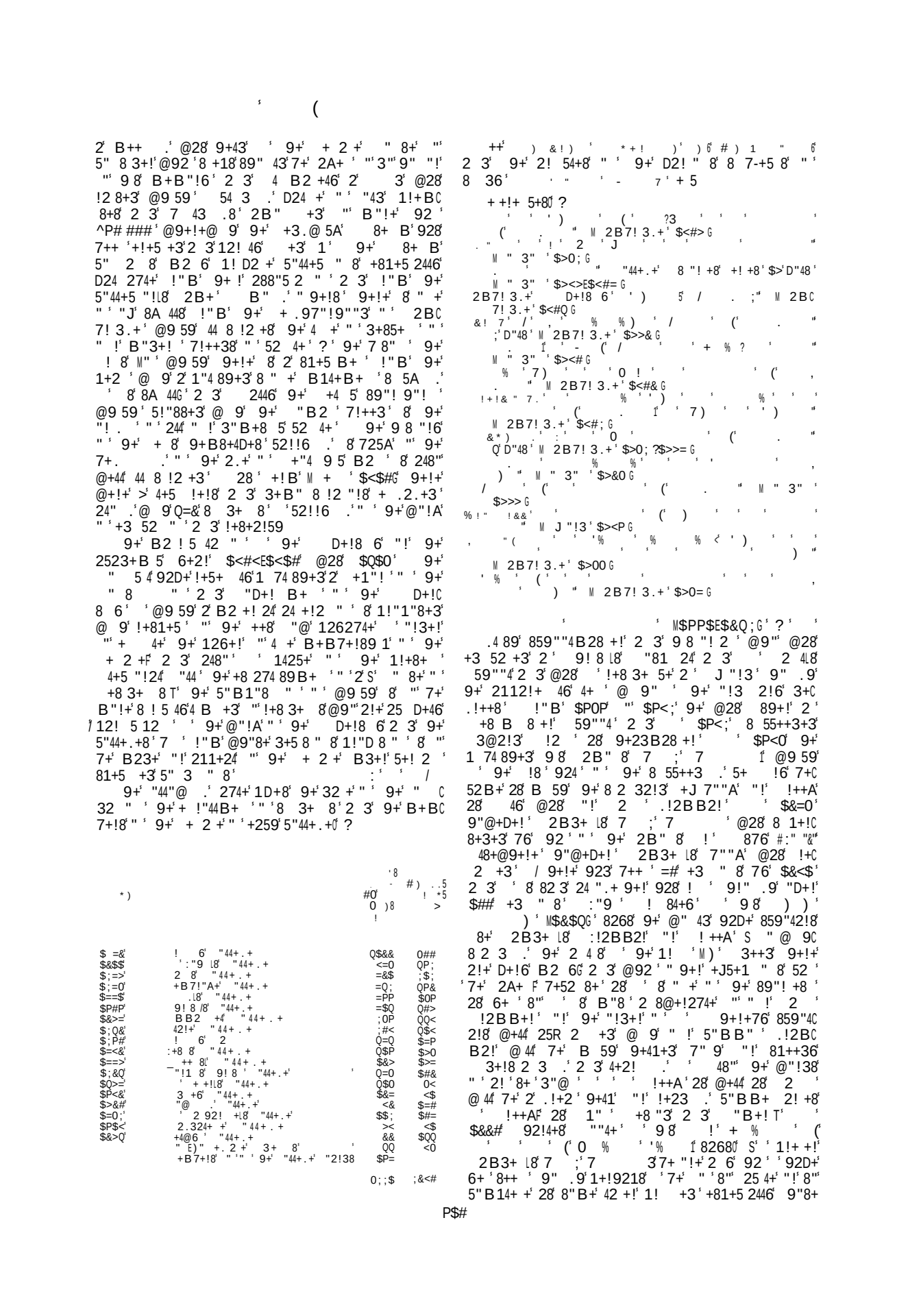

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that are set out by my worthy friends, Mr. Busby of Westminster and Mr. Dugard of Merchant Taylor's School." Camden at Westminster School had to share with one other master the teaching of 120 boys, though he would use the services of monitors and the *custos*. In his time the Dean of Westminster (Launcelot Andrewes) "would send for the older boys of the school to the Deanery and teach them Greek from 8 till 11 o'clock." It must have been in the vacations (1578–1600) that Camden made his tours of antiquarian discoveries, which he eventually published in his *Britannia* (5th edition, 1600). It may reasonably be suggested that his researches into early British history must have brought an influence of a practical kind into the boys' studies. Anyway, his close interest in Westminster Abbey, the epitaphs in which building he edited in 1600; his collection of old chronicles in 1603; his *Remains concerning Britain*, 1605; his *Annales* of Queen Elizabeth's reign, published, first part 1589, second part 1628, represent the new spirit of historical research, and mark Camden as the great historian-schoolmaster of Queen Elizabeth's reign. Finally, in 1622, Camden endowed a readership in the University of Oxford for a lecturer in history, thus showing himself, educationally, a pioneer in the university teaching of history as a differentiated subject. F. W.

CAMERARIUS, JOACHIM. — The friend of Melanchthon at Wittenberg, and a prolific writer and editor of classical texts; was born at Bamberg, in 1500, died in 1574. He is interesting in the history of education as an editor of Homer, the Greek Elegiac Poets, Theocritus, Sophocles, Thucydides, Herodotus, and Aristotle's *Ethics*, *Politics*, and *Economics*, the Aristotelian editions being posthumous. His *Plautus*, edited in 1552, is an important link in the chain of the collation of classical Mss., which at length resulted in the restoration of the ancient literature to a worthy form. Camerarius wrote several works directly upon education, including a *Dialogue on the Proper Life of Boyhood*, annotations on the first and second books of Quintilian's *Institutes*, *Precepts of Honor and Behavior in Boyhood*, and a didactic work which he called the *School of the Wise*, or the *Seven Wise Men*. P. R. C.

Joachim Camerarius (1500–1574).

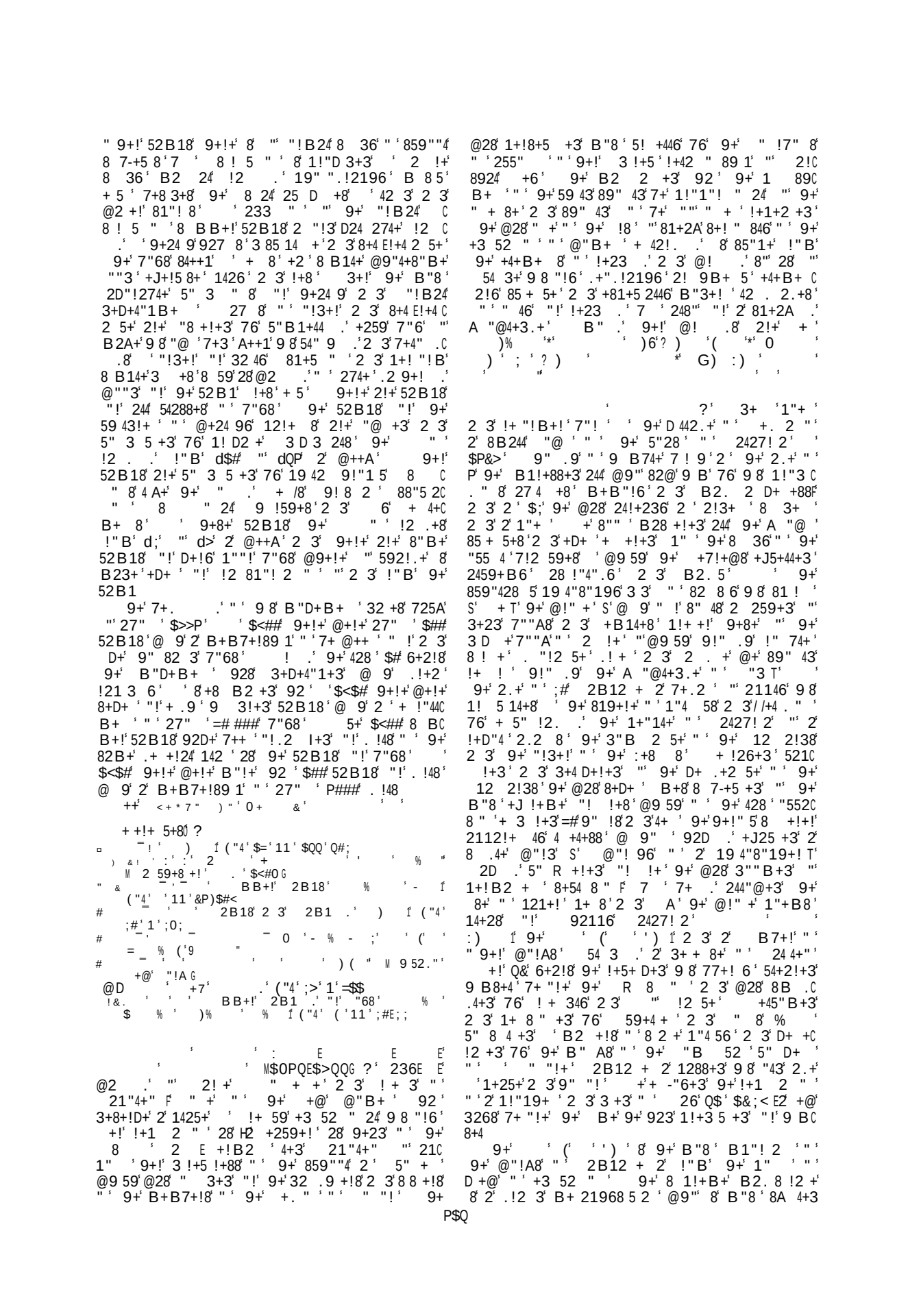
References: —

CAMERARIUS: *Dialogus de vita decente aetatem puerilem quodque hoc studium Deo placeat; Ludus sapientum; Praecepta honestatis.*

SANDYS, *History of Classical Scholarship.* (Cambridge, 1903–1908.)

CAMP SCHOOLS. — Summer camps for boys and girls constitute an interesting phase of educational development in the United States. The long summer vacation and the remarkable changes in the character of the home resulting from the growth of cities and the specialization of commerce and industry have created a need for new forms of education. The home, particularly in the city, no longer affords opportunities for boys to secure that physical, moral, and mental training that our fathers received from participation in the manifold activities which were carried on in the homes of our grandfathers. The work of the world has been removed from the home to the factory, the office, and the store, where it is being done better than ever before by specialists, each in his own class. All-round manly development demands sturdy work and manly play, each with its own special contribution of moral power, physical vigor and experience in social relations. The summer camp supplements the city school and the home by furnishing certain educational advantages, which the home no longer affords, and the city school cannot provide in adequate measure. In the summer camps, which are usually conducted for from 4 to 10 weeks, the boy has the companionship of boys of his own age, and of men of strong character who understand boys; he lives a simple outdoor life in close touch with nature; he develops his latent powers for inventing and making things; he acquires valuable physical accomplishments in land and water sports; and, through intimate social relations, learns how to play, work, and live with others.

In some of the summer camps regular instruction in school subjects is given, mainly to assist boys who have failed of promotion in school or who wish to prepare for the September college entrance examinations. Study is usually limited to 3 or 4 hours a day, the rest of the time being devoted to outdoor physical activities. In



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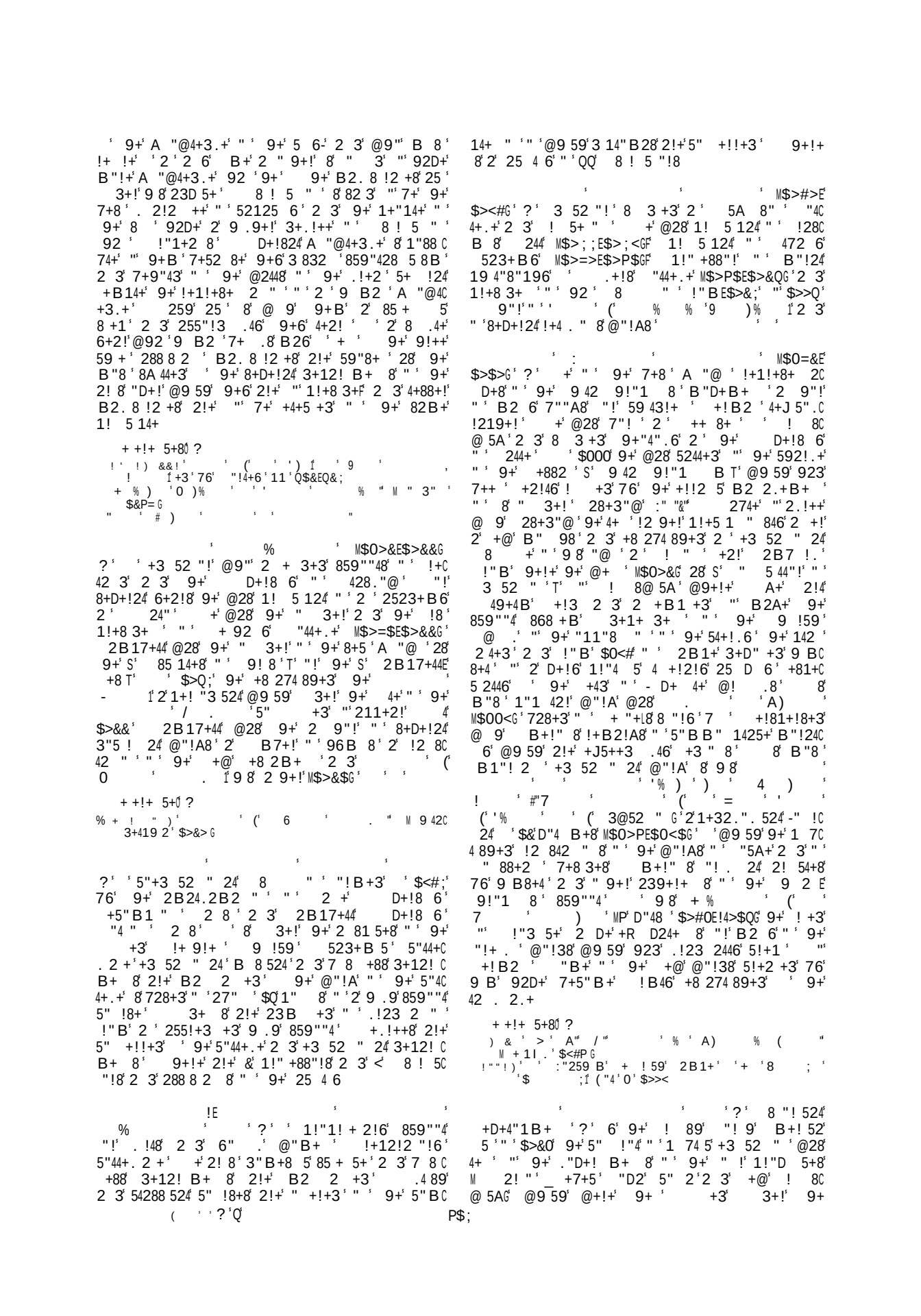

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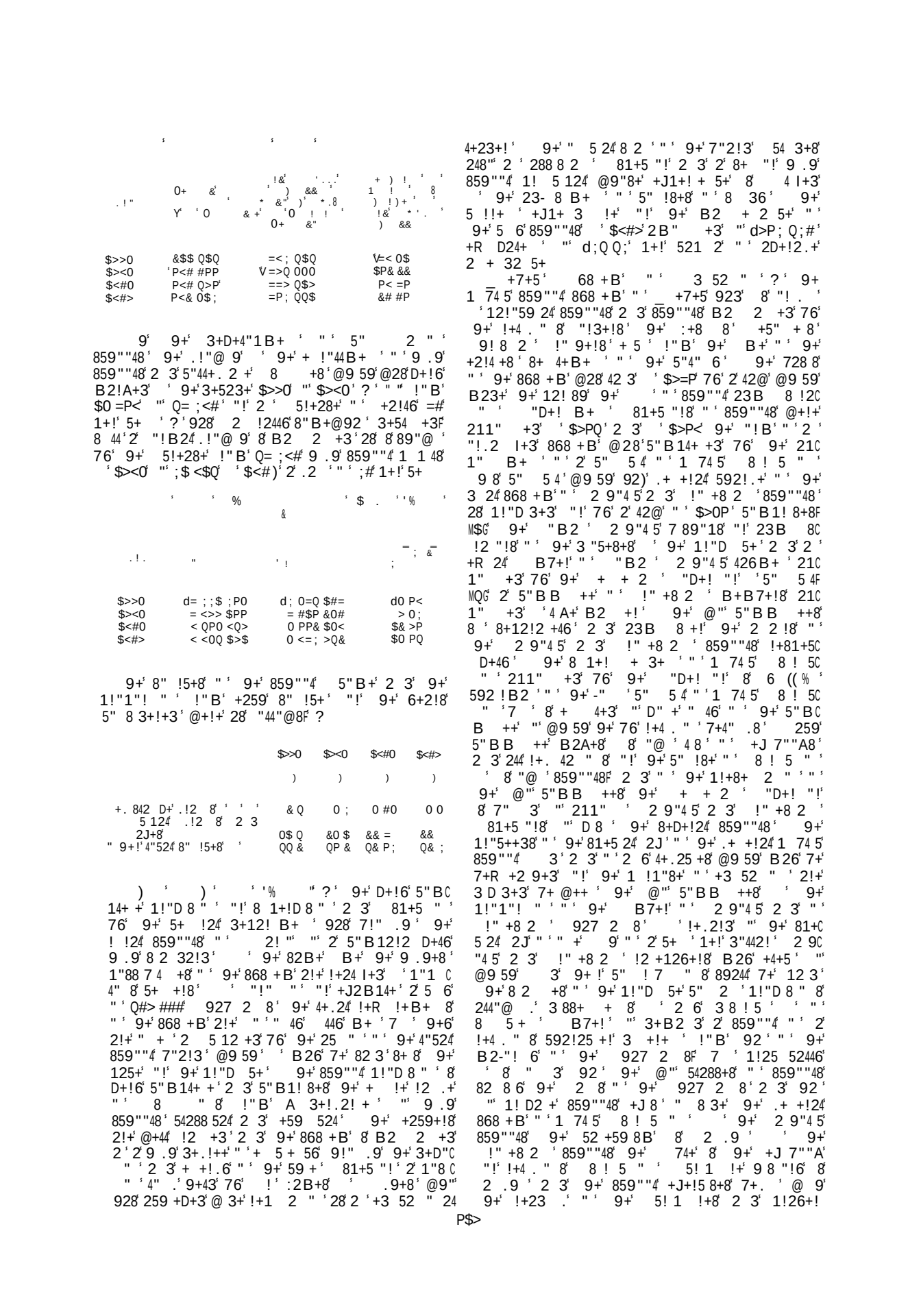
" ? $>0&L 9+ " 5+ " 59 + 8 1+! + 3+ @28 27"4 89+3 2 3 8 3 +8 !2 8 +!!+3 "" 2 8 +!" 3 52 " @9"" 54 3+3 @ 9 9 8 1!"D 5+ 244 9+ 1 74 5 2.+ 5 +8 " +3 52 " 9 8 9+ S 5"B B" T "! C 1 74 5 859""48 T @+!+ 7!" .9 "" 54"8+! !+42 " @ 9 9+ 8+5" 32!6 859""48 2 3 9 .9+! 8 " 8 24 9" .9 9+6 5" +3 "" 7+ 8+12!2 +46 23B 8 +!+3 8 2 B+B7+!" 9+ ."D+! B+ 5" 5 4 9+ 8 +!!8 1"@+!8 .!+2 46 +J5++3 9"8+ "! B+!46 3+D"4D+3 1" 9+ 1+! + 3+ + 2 +8 2 3 42!.+46 3 !+5 8 859""4 4+. 842 " 8 2 24 !+1"! " 9+ + + 2 E "D+! "!5"B1! 8+8 244 9+ 1 74 5 2.+ 5 +8 " +3 52 " 2 3 8 59 8 2 +B+ 8 2 3 8 ..+8 " 8 "!1!"B" . 9+ +!+8 .+ +!C 2446 28 9+ B26 3++B 8+ 4 2 3 +J1+3 + +! 928 1"@+!" "5 3+5 3+ 1" 244 3 81 +8 2 3 5"B142 8 42 3 7+ "!+ 9 B 9+ 8+ 4+B+ " @9 59 8 " 9+!@ 8+ 1!"D 3+3 76 42@ 2 3 1" 244 211+248 B23+ "9 B !"B 3+5 8 " 8 " 8 7"!3 2 + 859""4 " 5+!8 9+ +3 52 " 3+12! B+ 54 3+8 9+ B 8 +!!8 " 5 24 8 2 1!" +88 " 24 288 8 2 8 23D 8+!8 2 3 81+5 24 81+5 "!8 244 8+4+5 +3 @ 9 !+.2!3 "" 9+ !" 1!" +88 " 24 5"B1+ + 56 9+ +D+!E C 5!+28 .85"1+ 2 3 5"B14+J 6 " 9+ 868 +B 8 3 52 +3 76 9+ 3+D+4"1B+ " " 9+ 3+12! C B+ 9+ B"8 !+5+ 44 8 !2 " 8 " 9 8 .!"@ 9 2!+ 9+ 5!+2 " $<#& " 2 3D 8"!6 " 5 4 " 3 52 " 5"B1! 8 .!+1!+8+ 2C D+8 " 9+ D+!8 +8 " 9+ D2! " 8 54288+8 " 1 74 5 859""48 " 9+ 81+5 "!2 + 2 3 4"524 ! 8 ++8 2 3 9+ 211" B+ " " 2 8 1+! C + 3+ @9"" 25 8 28 9+ B 8 +!!8 !+1!+8+ 2C D+ 9+ 5" 5 4 9+ 5 B7+ " " 9 8 " 5+ 8 +5+882! 46 2 +3 52 " 24 81+5 24 8 9 8 3 +8 7+ . " +J+5 D+ 7 23D 8"!6 9+ 3+12! B+ 5"B1! 8+8 @ 9 8 1!"D 5+0 A 3+!.2! + 8 1 74 5 859""48 2 3 .9 859""48 9 .9 859""48 2 3 5"44+. 2 + 8 " 8 1+!C 2 . "" 8+5" 32!6 +3 52 " 2 3 81+5 24 859""48 "! !2 .+259+!8 2! 82 8 + 5 % " ? 9+ B 5 124 868 +B

" ' 2! "' 2 "!38 2 ' 23B !274+' 728 8 "!' 9+' 4"524 5" !"4 " ' 859""4 2 2 !8 ' 9+' 1!"D 5+' 8 3 D 3+3 "' 5" +8 ' @9 59 2!+' 8 73 D 3+3 "' B "!' B 5 124 +8 ' 9+8+' 2!+' "@ C 89 18 ' @9 59 "!' 859""4 B2 +!8 2!+' 8 73 D 3+3 "' 8+5 " 8 ' 2 3 5"!1"!2 +3 D 442.+8 ' "@ 8 ' 2 3 5 +8 ' 9+' !+81" 8 7 4 +8 2 3 1! D 4+.+8 " ' +259 " ' 9+8+' 3 D 8 " 8 ' 28 !+.2!38 +3 52 " ' 2!+' 54+2!46 3+ +3 76 42@ ' 9+6 2!+' +J+!5 8+3 9!" .9 859""4 ! 8 ++8 +4+5 +3 76 9+' !2 +C 126+!8 MB+ ' 2 3 @"B+ G " ' 9+' !+81+5 D+' 5"B B +8 ' 9+' 1 74 5 "!' 5"B B " ' 859""48 728+3 1" ' 9+' 42@8 " ' $>=&' >0' 2 3 8 78+C R + ' B+28 !+8 ' 2 3 9+' 5"B 14+B+ 2!6 9 .9 859""48 2 3 5"44+. 2 +' 8 +8 28 1!"D 3+3 "!' 76 9+' .9 59""48 5 ' " ' $>>P' "!B' ".+ 9+!' 2 +3 868 +B' " ' 1 74 5 +3 52 " ' 4+23 .' 1' "' 9+' D+!8 6 B2 ! 5 42 " ' 9+' 868 +B' 8 B2!A+3 76 9+' - 3 5 " 8 7242 5C .' " ' 5+ !24 2 3 4"524 5" !"4 ' 9+' 5+ !24 2 9"! 6 3+ +!B +8 9+' 859"428 5 8 2 32!38 76 " 5 2 !+R !+B+ 8 9+' 4"524 2 9"! +8 +8 274 89 859""48 ' 211" ' +259+!8 2 3 81+5C "!8 ' !+. 42 +' +J1+ 3 !+8 ' + 5 ' 7 ' 2!+' ."D+! +3 2 ' +D+!6 8 +1 76 9+' B 8 +! 24 B2 32 +' 9 8 2!+' 8+5 !+3 +R 24 6 " ' 1!"C D 8 " ' 2 3 "!B' 8 2 32!38 9!" .9" ' 9+' 1!"D 5+' 1!" +88 " 24 !2 .' "' 8"B+' 3+.!++' "!' 244 +259+!8 ' 52!+ 4 23- 8 B+ 8 " ' 5" !8+8 " '8 36 "!B' +J 7""A8 ' 2 3 2 ' 81+5 " ' 8+!D 5+' 8 ! 5 46 1!" +88 " 24 ' 8 1+!8" +4 0 ' $). %' '% '" ? ' 9+' +8 274 89B+ ' " ' 9+' S' 5"B B " '>' "!' S' 1 74 5'>' 859""48 8 B2 C 32 "!6 1" ' 9+' 4"524 859""4 7"2!38 ' @9 59 B 8 ' B++ ' 5+! 2 ' 1!+85! 7+3 5" 3 " 8 28 !+.2!38 8 +8 ' 7 43 .8 ' 2 3 +R 1B+ F "!' 8 2 5+' ' 9+' 528+' " ' ! !24 859""48 ' 9+' 7 43C .' B 8 '7+' 2 '4+28 ';# ++ ' !"B' 9+' 1 74 5 9 .9C @26F @9+!+' 9+' 2D+!2.+' 2 + 32 5+' " ' 9+' 8+5C " ' "!' 9+' 1!+D " 8 6+2!' +J5++38 &#' 9+' 859""4E 9" 8+' B 8 '5" 2 'Q' !"" B8 ' 2 ' 233 " 24 !"" B' 2 3 +259+!' 7+ .' !+R !+3 "!' +259' 233 " 24 P# 1 1 48 ' 2D+!2.+' 2 + 32 5+F 9+!+' B 8 ' 248"" 7+' 8+12!2 +' + !2 5+8 @ 9' 5"D+!+3' 1"!59+8 2 3 8 274+' 54"2A!"" B8 "!' 7"68 2 3 . !48 ' " 3 " 8 28 "' 4 .9 .' 9+2 .' 82 2 " ' 2!+' 2 ' 54 3+3 ' 9+' " 5 24 !+R !+B+ 8 ' 9+' 859""48 2!+' 54288 +3 "!' .!23+3 ' P "!B8 ' 1!"B " 8 7+ .' B23+' @ 5+' 2 6+2!' J2B C 2 " 8 5" 3 5 +3 76 9+' +259+!8 3+ +!B +' ' 12!' 9+' +88 " ' 9+' 1 1 4 "!' 1!"B " F 7 ' 9+' !+5"!3 " ' 9 8 54288 @"!A' 928 .!+2 +!E @+ .9 ' 9 8 !+81+5 ' 9+' " 5 24 1!".!2B ' @9 59 8 "44"@+3 76 2 ' 859""48 ' 54 3+8 !+23C .' 2 3 4 +!2 !+' .+".!2196 ' .!2B B2!' 2 3 5"B 1"8 " ' 9 8 "!6 H2! 9B+ +' @! .' 3!2@C .' +B1+!2 5+' 2 3 96. + +' B 8 5 ' 3! ' 2 3 524 8 9+ 58 ' B"!24 2 3 !+4 . " 8 8 ! 5 " F ' 9+' " ! 9 "!B' 2.! 5 4 !+' 8 !"3 5+3 9+' 9 "!B' @28 + 3+3 28 2 8"! " ' 9 .9 .!23+' 3 D 8 " ' ' ! !24 859""48 ' 2 3 !"B' ' 928 3+D+4"1+3 2 868 +B' " ' 5" 2 " ' 54288+8 "!' 859""48 @9 59 92D+' !21 346 5!+28+3 8 5+' $<#P' 9+' 1 !1"8+' " ' 9+' +12! B+ ' ' "8 +! .' 9+8+' 54288+8 8 " ' "' 8+!D+' 9+' 12!C 5 42!' +!+8 8 " ' 9+' ! !24 1"1 42 " ' 28 "11"8+3 "' " 9+!' 8+5 MB8 ' 7 ' "' B++ ' 9+' 42!.+!' +!+8 8 " ' 9+' 2 +' 28 2 @9"4+' @9 4+' 5" ! 7 .' "' 9+/ 7+8 ' 3+D+4"1B+ ' " ' 9+' 3 D 3 24 1 1 4 ' 9+' 5"B 14+ +' 142 ' "!' 9+' 5" 2 " ' 859""48 54 3+8 M$G 2 J+3 5" !8+' "!' .+ +!24 5 4 !+FE MQG 2 ' +4+B+ 2!6 5" !8+' ' 2.! 5 4 !+' "!' 244 +3 8 7-+5 8F M;G 2 5" !8+' ' 9+' +5" "B 58 " ' 9+' 9"B+ ' @"' +259+!8 2!+' !+2446 !+R !+3 "' 52!!6 " ' 9+' @"!A' 7 ' 2 ' 1!+8+ '28 2 ! 4+' " 46 " +' +259+!' 8 + .2.+3 ' +259 859""4 "!' 9+' 81+5 24 3 +8 " ' 9+' 5" 2 " ' 54288 ' 9+8+' 54288+8 ' "!' 859""48 ' "!.2 I+3 28 8 59 ' 2!+' 3+!' 9+' 592!.+' " ' 2 81+5 24 81+5 "!' 9+6 2!+' 52!+C 446 3 8 . 89+3 !"B' 9+' !+. 42!' 9 .9 859""48 ' 2 3 9+' 42@ 1!+85! 7+8 92 ' 9+6 89244 ' " ' 7+' "1+ +3 @ 9 ' 9+' 9 .9 859""4 3 8 ! 5 8 ' ' '% '" ? ' 9+' 42@ 1!"D 3+8 92 ' 2 6 B7+!" ' 9+238 " ' 2B 4 +8 " ' 4+88 92 ' D+' !+8 3+ 8 " ' 9+' 1425+' 2 3 "B2 ' 2 9"C 4 58 ' B 26 +' 2 3 +8 274 89 2 8+12!2 +' 859""4 11"! +!8 " ' 8 59 859""48 2!+' +J+B 1 ' !"B' 9+' 126B+ ' " ' 4"524 2J+8 "!' 9+' 8 11"! ' " ' 9+' 1 74 5 859""48 ' 9+' 8+12!2 +' 859""48 2!+' 244 3+!' ."D+! B+ ' 81+5 " ' 2 3 2!+' .+ +!C 2446 5" 3 5 +3 ' 255"!32 5+' @ 9 9+' 82B+' !+. 42 " 8 28 9+' 1 74 5 859""48 ' A+' 9+' 42 +!' 9+6 2!+' B2 2.+3 76 7"2!38 " ' ! 8 ++8 ' @9"' 2!+' +4+5 +3 76 9+' 8+12!2 +' 859""4 8 1C 1"! +!8 ' 9+' +259+!8 ' +J5+1 ' 9"8+' @9"' 2!+' B+B 7+!8 " ' 5+! 2 ' !+4 . " 8"!3+!8 '2!+' !+R !+3 "' 5"B 146 @ 9' 9+' " 5 24 !+. 42 " 8 ' "!3+!' "' !+5+ D+' 5+! 52 +8 ' 9+' 5" !8+' " ' 8 36 1 !8 +3 76 9+' 1 1 48 8 +2!46 9+' 82B+' 28 92 ' "!' 9+' 1 74 5 859""48 ' 2 3 9+' +J 7""A8 ' +J5+1 ' 9"8+' "!' !+4 . " 8 8 ! 5 " ' 2!+' ' B2 6 8 2 5+8 9+' 82B+' 9+' 1!"D 8 " ' 28 "' 8+12C !2 +' 859""48 2114 +8 "' !" +8 2 8 2 3 "' 5"4"!+3 1+!8 " 8 28 @+44 28 "' "B2 ' 2 9"4 58 7 ' 28 2 ! 4+' " 46 9+' 42 +!' 2D2 4 9+B8+4D+8 " ' 9+' 1! D 4+.+' "! 8 92D+' 7++ ' B23+' !"B' B+' "' B+' "' 3"' 2@26 @ 9' 9 8 +2 !+' 76 9+' +8 274 89B+ ' " ' 2 868 +B' " ' 1 !+46 8+5 42!' 859""48 7 ' 9 8 1 !1"8+' 928 4 4+' 1"1 42!' 8 11"! ' 2 3 " 8+5 2! 2 ' !+4 . " 8 +J+!5 8+8 " "' 8+4+5 +3 74+' !+23 .8 2 3 9+' "!3L8 !26+!' 2!+' !+R !+3 ' 244 1 74 5 859""48) ' '% ' % " ? ' 9+' 42@ " ' " 46 !+R !+8 9+' +8 274 89B+ ' " ' 1 74 5 859""48 76 4"524 2 9"! +8 ' 7 ' "74 .+8 12!+ 8 2 3 . 2!3 2 8 "' 8+5 !+' 9+' +3 52 " ' " ' 9+' 59 43!+ ' 3+!' 9+ !' 592!.+' 7+ @++ ' 9+' 2.+8 " ' >' 2 3 $= 6+2!8 ' + 9+!' 76 1 74 5 "!' 1! D2 +' 2.+ 5 +8 ' 9+' 4+.24 859""4 2.+' ' B26 7+' "78+!D+3 8 4" .+!' " "' Q' "' Q$ 6+2!8 ' 9 43!+ ' 2!+' !+R !+3 "' 5" "!B' "' 9+' ! 4+8 2 3 3 85 C 14 +' " ' 9+' 859""4 ' 2 3 D 5 " 8 "!' 5"!! . 74+' 59 43!+ ' 2!+' !+B2 3+3 "' 3 8 ! 24 859""48 ' 9+' 5"B 1 48"!6 859""4 1!"D 8 " ' 8 8 114+C B+ +3 76 427"!' 42@8 @9 59 "!7 3 9+' +B 14"6C B+ ' " ' 59 43!+ ' 3+!' $= 6+2!8 " ' 2.+' @ 9 1+ 24 +8 "!' D "42 " ' " ' 9+' 82B+' 9+' 5" C 3 " 8 3+!' @9 59 +J+B 1 " ' !"B' 859""4 2 + 32 5+' B26 7+' .!2 +3 2!+' 52!+ 446 3+E



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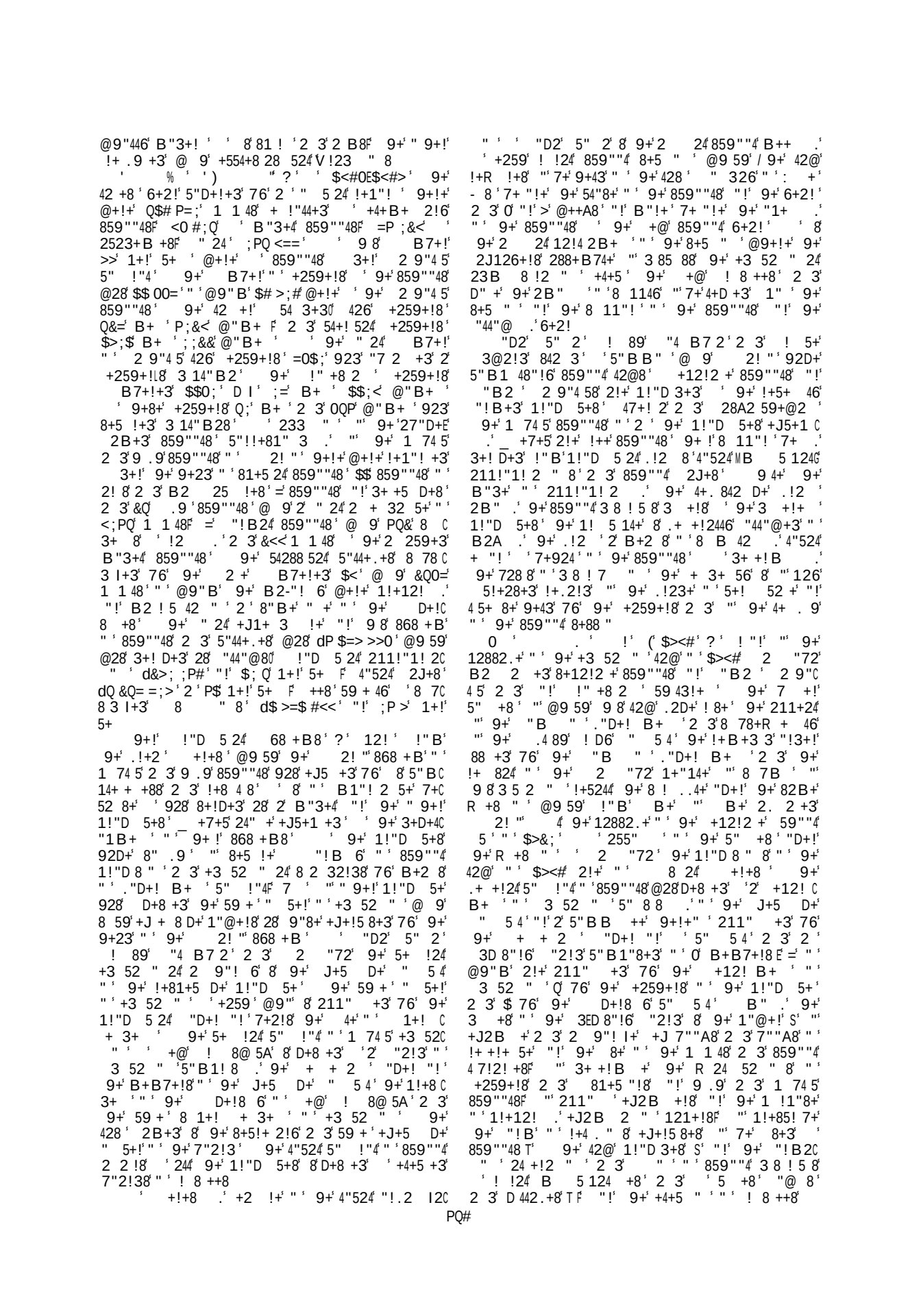
 %) "? 9+ 4"524 "859""4 23B 8 !2 " _ +7+5 8 2 859""4 B 5 C 124 6 " C 2 6 +!! "!6 +!+5 +3 "2 B C 5 124 6 "!+ 9+ 8 11"! " 859""48 3+!+ 9+ 5" !"4 " 859""4 5"B B 88 " +!8 "! " ! 8 ++8 +4+5 +3 76 9"8+ @9" 126 2 1!"1+! 6 2J M!2 +C 126+!8G T 9+ 5"B B 88 " +!8 2!+ +B1"@+!+3 " 3 D 3+ 2 B 5 124 6 " 859""4 3 8 ! 5 8 2 3 " B2 2 " +" "! @" 859""48 +259 3 8 ! 5 9+ 5"B B 88 " +!8 "! ! 8 ++8 +4+5 +3 28 1!"D 3+3 27"D+ 5" 8 +@92 8 +59 52446 +!B+3 2 859""4 5"!1"!2 " 9+8+ " 4 5+!8 92D+ 44 5" !"4 " 9+ 1 74 5 859""48 9+ ! !+81+5 D+ 2!+28 8 7-+5 " 46 "9+ .+ +!24 !+R !+B+ 8 " 9+ 5" 5 4 9+6 + .2.+ 9+ +259+!8 3+ +!B +9+ ! 8242! +8 1!"D 3+ 9+ 859""49" 8+8 2 3 +R 1B+ 8 2 3 .+ +!24 3 8592!.+ 9+ 82B+ 3 +8 28 9+ 859""4 ! 8 ++8 " 2! " 9+ 8+12!2C " " 9+ 859""48 +259 3 8 ! 5 76 !+4 . " 8 3 +!+ 5+8 5"B 14+ +8 9+ 1"4 56 7+. 76 9+ 3 D 8 " " 9+ 5+ !24 5" 5 4 "@" 2 " C "B" 8 5"B B ++8

 (% (' % "? 233 " "9+ 859""48 3+! 5" !"4 92 8 859""48 592!.+ " 9+ +4+5 +3 859""4 5"B B 88 " +!8 "! ! 8 ++8 " +259 B 5 124 6 9+!+ 2!+ B2 6 "B2 2 9"4 5 859""48 592!.+ " 9+ 54+!.6 "!" 9+ !+4 . " 8 "!3+!8 592!25 +! I+3 28 3+C 1+ 3+ "!12! 46 3+1+ 3+ 859""48 @9 59 !+5+ D+ .!2 8 + 9+!" !"B 1!"D 5 24 "! !"B 4"524 38 9+ 1 74 5 859""48 " _ +7+5 @9+ 9+!" "B2 2 9"4 5 "! !" +8 2 2!+ 3 8 . 89+3 28 +4+B+ 2!6 859""48 5"B1! 8C .+ D+ .!23+8 B"3+4 859""48 2 3 2523+B +8 9+ "B2 2 9"4 5 B"3+4 859""48 2 3 2523+B +8 3" " 54 3+ 9+ 54288 58 9+ !+ 5" !8+ 9+8+ 8 3 +8 7+ .+!+8+!D+3 "!+ 5428C 8 524 5"44+.+8 " 3+3 2 3 B2 2 +3 "!+ 9+ B"8 12! 76 9+ 9 !59 "!+ 76 9+ !+4 . " 8 "!3+!8 9+ !" +8 2 B"3+4 859""48 2 3 2523+B +8 54 3+ 5" !8+8 2 2 3 !++A .+ +!24 B26 7+ 82 3 92 9+ 859""48 3+!+ 9+ 592!.+ " 9+ !" +8 2 5"B B ++ 2!+ 8 B 42!+ 9+ !+ 54288 52 " 2 3 5" 3 5 " 9+ 1 74 5 859""48 " 9+ " 9+!+ 1!"D 5+8 9+ 868 +B 3+!+ 9+ 592!.+ " 9+ 2 9"4 5 5"B B ++ 9+ + 3+ 56 8 " 3!2@ 892!1+!+ 3 8 5 " 8 7+ @++ 859""48 "!+ 9+ 59 43!+ " 9+ 1""!+!+ 54288+8 2 3 9"8+ 92 @ 44 2 C !2446 2 !25 9+ 12 !" 2.+ " B+ 7 8 +88 2 3 1!" +88 " 24 + 9+ " 9+!+ 92 3 89" 43 7+ !+B+B7+!+3 92 9+ 54+! 524 +259C .+ "!3+!8 +81+5 2446 9+ 9! 8 2 !" 9+!8 92D+ 24@268 12 3 .!+2 2 + " " 9+ 3 8C ! 24 !2 .+ " 9+ 6" .+ 5"B7 .+ @ 9 9+ 8 ! 5 " +4+B+ 2!6 7!2 59+8 9 8 9+!+5+ + "! "!1!"B" .+ B2 24 !2 .+ 2 3 .2!3+ .+ 9!" .9 9+ 2.+ 56 " +4+B+ C 2!6 859""48 255"!38 @ 9 9+ !23 " 8 " 2 9"4 5 +3 52 "!8 92 @28 "!B+!46 3" + 2 +@ 859""48 8 8 B146 7+5"B .+ +!24 3+!+ 9+ +@ B1 48+ 9+ 81+5 "!" " 9"! 5 4 !+ 1! B2!6 859""48 3+!+ 9+ 2 9"4 5 5"B B ++!+1"! 8 92 @9 4+ $<#0 .2!3+ .+ @28 52!! +3 " Q# 5" +8 2 3 &# 859""48 !+81+5 "$QP> 1 1 48 $<#> @28 +J + 3+3 "Q0 5" +8 <0 859""48 2 3 QQ## 1 1 48 8 @"! 96 " " +248"2 92 " 9+ " 24 1 1 48 9+ 2 9"4 5 +4+B+ C 2!6 2 3 B"3+4 859""48 2 3 2523+B +8 <= 1+! 5+ 2!+ !+ 59F @9+!+28 9+ 5"!!+81" 3 .+ 859""48 3+! 9+ !" +8 2 5"B B ++ <P 1+! 5+ " " 9+ 1 1 48 2!+ " .4 89 "! . B2 6 859""48 7" 9 42 . 2.+8 2!+ +B14"6+3 28 B+3 2 " 8 ! 5 " 9+ 2 9"4 5 B"3+4 859""48 92D+ 28 2 ! 4+ 1!+12!2 "!6 3+12! C B+ 8 "! 9+ +4+B+ 2!6 8 ! 5 " " 1 1 8 @9" @ 44 1!+8 B2746 5" +9+ ! +3 52 " 1 "$& "! $> 6+2!8 " 2.+ 9+ B"3+4 859""4 5" !8+ 8 5" " 8 @ 9 92 " 9+ 2523+B +8 2 6 " 9+ 54288 524 5"44+.+8 248" 92D+ 1!+C 12!2 "!6 3 D 8 " 8 "! 9+8+ !+28" 8 2 54288 C 52 " " 9+ 859""48 " _ +7+5 " 9+ 728 8 " .!23+8 8 R +B 84+23 .

 0 G) (% (' 0 % "? +8 3+8 9+ 859""48 27"D+ + B+!2 +3 9+ 42@ B2A+8 1!"D 8 " "! 9+ +8 274 89B+ " " +" "! B"!+ "!B24 859""48 @ 9 2 259+3 B"3+4 "! 1!25 5+ 859""48 "2!38 " J2BC +!8 211" +3 76 9+ + + 2 E "D+! "! 1" 9+ !+5"B B+ 32 " " " + 9+!5"B B ++ " 9+ " 5 4" 74 5 8 ! 5 " 2!+2 9"!C I+3 "+J2B +52 3 32 +8 "! +259+!8 1"8 C " 8 2 3 " 88 +3 14"B28 "9"8+ @9" 1288 9+ +8 8 9+ +J2B .7"2!38 "! " !+24 2 3 _ +7+5 2!+ 1!"D 3+3 "!76 81+5 24 8 2 +8 ') % (') "? 9+ 8 11"! " 9+ D2! " 8 54288+8 " 859""48 5"B 1! 8+3 9+ 868 +B 8 3+! D+3 !"B 4+. 842 D+ .!2 8 4"524 2J+8 2 3 ++8 9+E ++8 2!+ 4"@ " +J5++3C .P# 5+ 8 2 B" 9 2 3 9+6 B26 7+ 2 3 " + 2!+ !+B +3

 0 "? 9+ 868 +B 928 +4+B+ 8 " ! 5 " 28 @+44 28 " 1"@+! 7" 9 " @9 59 2!+ B"8 25 D+ 9+ 5 +8 " !+24 @ 9 2 1"1 42 " " Q&> ### 928 1!25 52446 2 ! 14+ 868 +B " 859""48 " 1 74 5 859""48 3+!+ 9+ !" +8 2 7"2!3 1 74 5 859""48 3+!+ 9+ 2 9"4 5 7"2!3 2 3 8 78 3 I+3 1! C D2 + 859""48 9+ !" +8 2 859""48 @9 59 $<#> + !"44+3 $$ <P&1 1 48 54 3 .P#> A 3+!.2! + 8 2 3 $=;$ 9+ ; 9 .9 859""48 !+8+B74+ 859""48 " 9+ +3 2 +8 9+ + !"44B+ 9+ 2 9"4 5 859""48 9+ 82B+ 6+2! @28 Q0 $P=" @9"B P>P> @+!+ 1! D2 + 8 78 3 I+3 8 " 8 9+ +259 .!5+ B7+!+3 >QQ @9"B =$$ @+!+ B+B7+!8 " !+4 . " 8 "!3+!8 "!@"B+ 2 3 $<& " !+4 . " 8 "!3+!8 "!B+ 9+ " 24 +J1+ 3 !+ " 9+ 12! " 9+ 2 9"4 5 859""4 7"2!3 @28 d;0; #P# " @9 59 d=; QP# @+!+ 8 114 +3 76 ++8 9+8+ 12! 5 42!8 3 52 + 9+ 3++1 3 8 5 " 7+C @++ 9+ @" 12! 8 " 9+ 3 24 868 +B 9+ " +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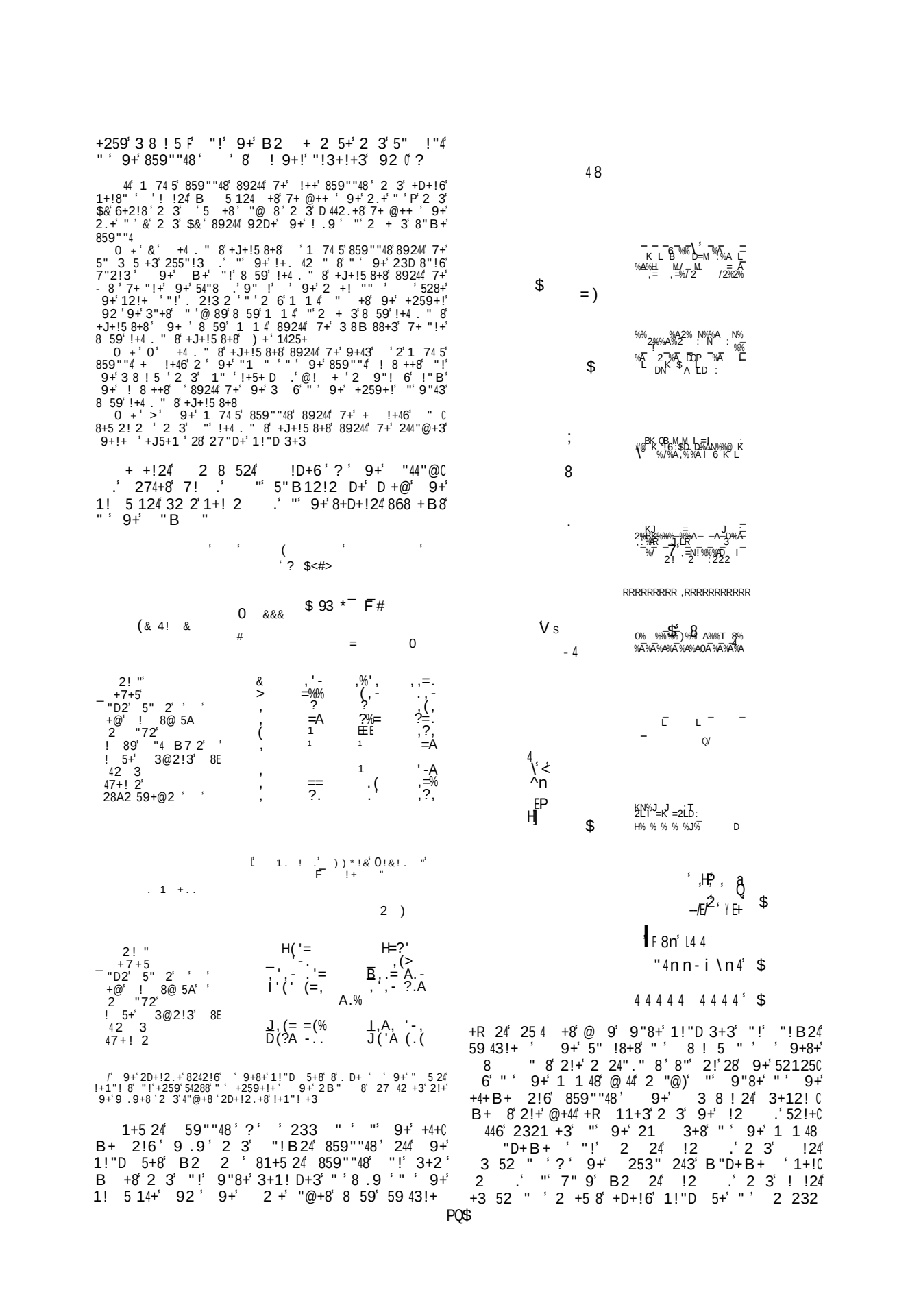

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1+! "3 B"8 528+8 " ;'6+2!8 !8 81+5 24
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B+ "! 9+ 8 + @9 59 928 7+5"B+ 9+
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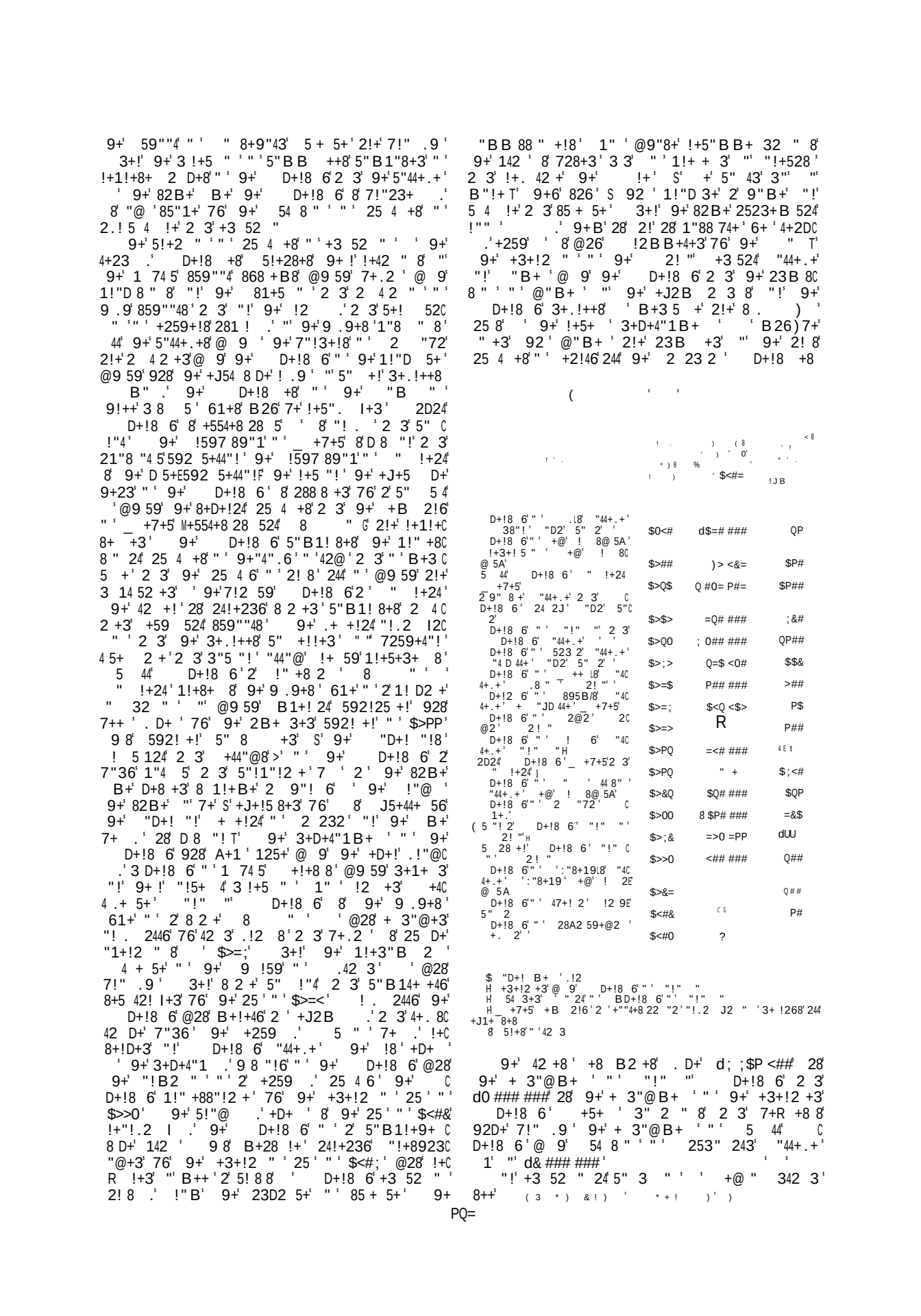

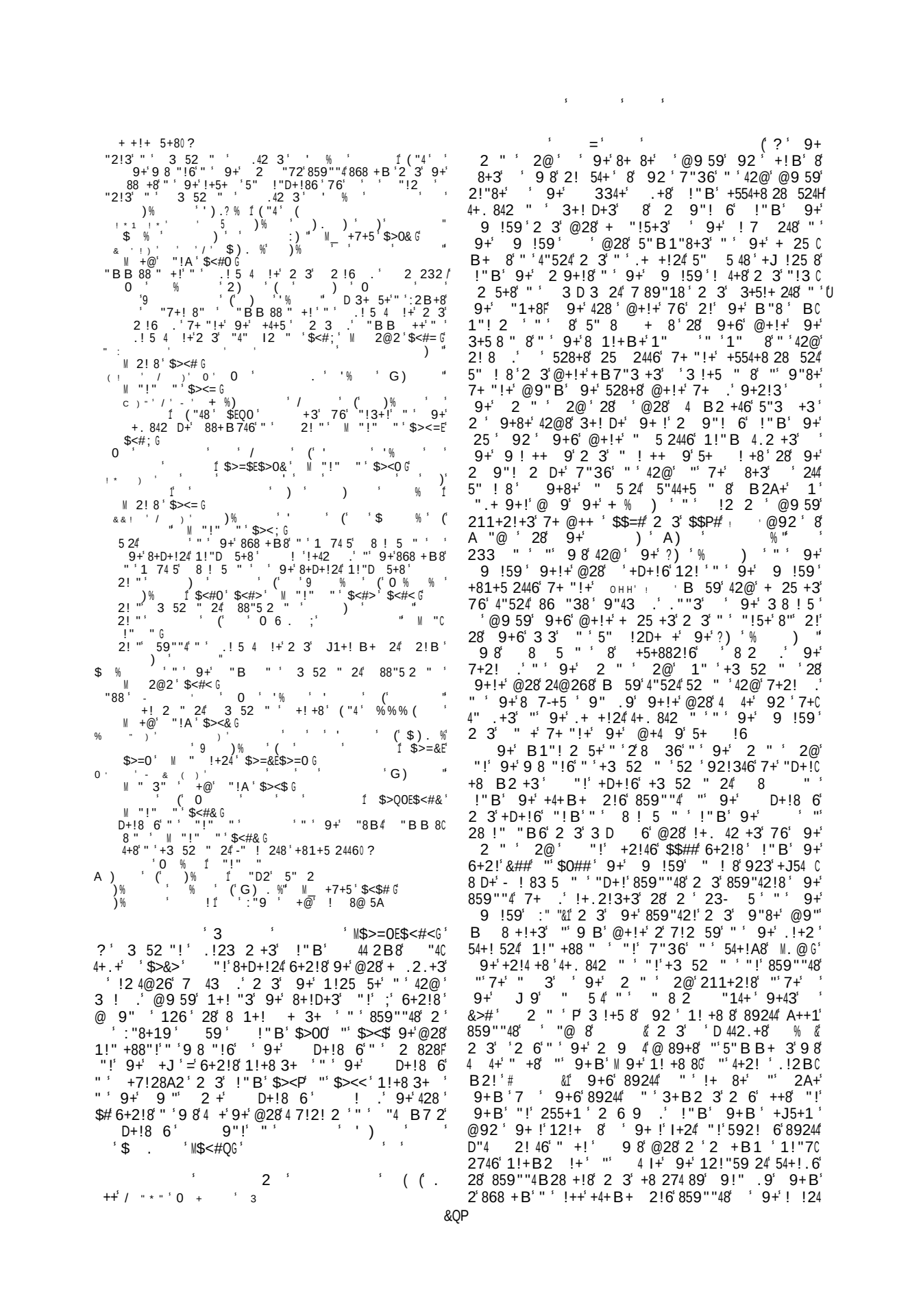

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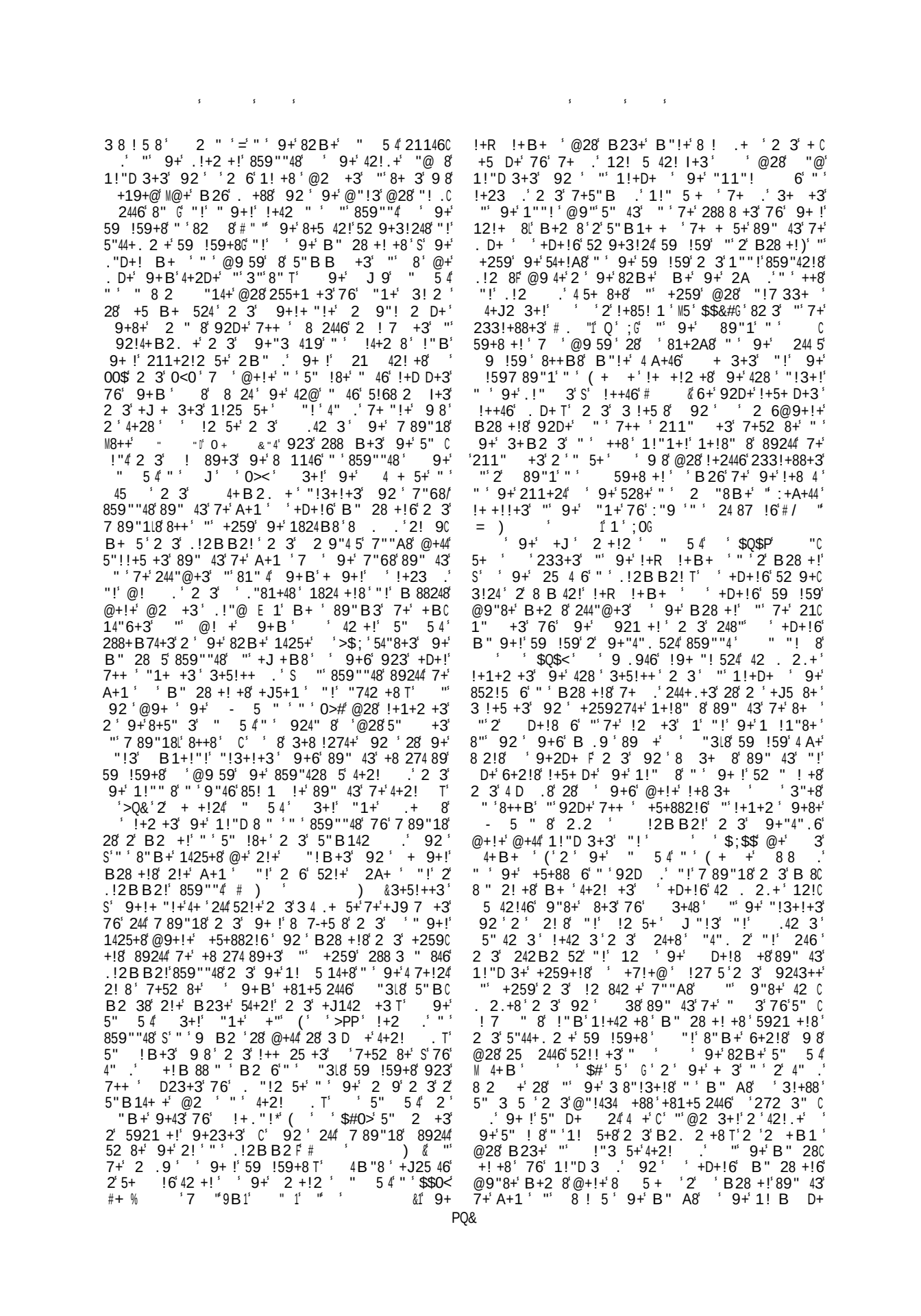


1!25 52ﬂ 4 6 8 B B . 1 9+ 25 2ﬂ 42@ 2ﬁ 9+ +J 8 +3ﬂ 2 3 . D .2 B1+ 8 " +@ 8 36 ! . 9+ +J Q### 6+21ﬁ 9+ 868 +B0 2 5 2!!2 .+B+ " 9+ B2 +! 2ﬂ @2ﬁ " "@+3 2 3 8+D+!2ﬂ B1"! 2 5"44+5 " 8 211+2!+3 " 9+ @"!Aﬁ " !592!3 " "!B8 7+ @++ $#$Q 2 3 $#Q; 8+4B " 552 M3 $#>&G + 83+3 27" $#>& 2 3 D" " 92! !+8ﬁ M3 $$$0G ! . 9 8 1+! "3 @+ 92D+ "! B2 " 2ﬁ " B+ 9"38 " 8 ! 5 " 2 " 2@ 9+54+!.6 B 8 92D+ 8+3 9+8+ "! 8 B 42! 7""A8 +81+5 2446 9+ 1+ + 248 2 3 @+!+ +J1+5 +3 7+ 2B 4 2! @ 9 9+B 9+!+ 8 !25+ " 868 +B2 5 8 ! 5 " 2 " 2@ 923 " 6+ 7+5"B+ 2 85 + 5 8 36 2 3 9+!+ @+!+ 8 " 8 @9+!+ 5" 43 92D+ 7++ 2 .9 28ﬁ 59 3+ 8 9+!+ @+!+ " 2 " 2@ 7 9+ @9"4+ 8 7-+5 @28ﬁ 9+ 1!+85 + 5 8 2.+ 9+ 5" !8+ " 9+ @+4 9 5+ !6 2 !+D"4 0 " ""A 1425+ 9+ +259 . " 2 " 2@ 28 3++3 " 24ﬂ " 9+! 7!2 59+8 " A "@4+3.+ 2 3 7+52B+ +" " 9+1! 5 124ﬁ 8 7-+5 8 2 .9 2 "4". 2 2 3 42 +! 2 2 D+!8 +8 233 " " 9+.+ +!2ﬂ +44+5 2ﬂ !+D D2ﬂ " 9+ @+4 9 5+ !6 @9 59 923 B23+ 8+4 +4 !8 2 "4". 2 2 3 2! 8 9+!+ @+!+ 8+D+!2ﬂ 52 8+8 "! 9+ 592 .+ 92 52B+ "D+! 9+ 8 36 2 3 +259 . " 2 " 2@ 9+!+ @28 9+ !8 1425+ 9+ !+D D2ﬂ " 2 85 + 5 8 36 " "B2 2@ @9+!+76 3+! 9+4+23 " ! +! 8 :" "& 2 3 9 8 "44"@+!8 92 42@ 7+52B+ 9+ 4+23 . 8 7-+5 8 3 +3 2 "4". 2 9+!+ 923 +D+! 7++ 2 B+ @9+ "B2 2@ 923 " 7++ 8 3 +3 2 3 2 .9 " 8"B+ +J + 2 3 8 5+ 9+ 42 +! 12! " 9+ 9 5+ !6 8 5" +5 " @ 9 2 " 2@ @28ﬁ 5" 8 2 +5" 346 9+!+ @28ﬁ 9+ +@ 3 24+5 52ﬂ B+ 9"3 8+3 76 7+42!3 :" "& 9 8 ' % 1 @ 9 8 285 2 . 28A " 7242 5 .2 3 !+5" 5 4 . 5" 4 5 . 2 9"! +8 9+ B+ 9"3 !8 +B0 14"6+3 9+ +@ +259 . " 2 " 2@ 9 !346 9+!+ @28ﬁ 9+ +@ +!+8 . D+ " 9+ 8 36 " 2 " 2@ 76 9+ .!+2 3+D+4"1B+ " 9+ 5" 8 " 24ﬂ 2 3 4+.2ﬂ 8 3+8 " 9+ 9 !59 9+ .!+2 8 ! ..4+ @9 59 923 7++ 2 . !2 +3 76 43+7!2 3 2 3 7!" .9 " 2 1!+4 B 2!6 ! B19 9+ " 5"!32 " "!B8 $$Q; 9+ @"!A @ 9 @9 59 9+ +@ B+ 9"3 @28ﬁ !"3 5+3 @28ﬁ 9+ 1!"3 5 " " 2 B" A " 9+ " D+ " +4 J 2 "4". 2 !2 2 76 2B+ @9 211+2!8 92D+ 2 .9 2 " 2@ 2 3 92D+ 1 74 89+3 7+ @++ $$=$ 2 3 $$P# 9 8 % + %) 1 42 +! A "@ 28ﬁ 9+ + %) 9+ B1"! 2 5+ " 9+ @"!A @28ﬁ 92 !"3 5+3 2 B+ 9"3 "92 34 . 9+ .!+2 B288 " 2 " 2@ @9 59 923 .!"@ 1 " ! 33 . 76 2 3 24+5 52ﬂ B+ 9"3 " 8 B+!274+5 !23 5 " 8 2 3 7 43 . 1 !"B 2 5" 8 8 + 7"36 " 4+.2ﬂ 3"5 ! + +259 . 2 " 2@ @28ﬁ "@ 1"88 74+5 28ﬁ 2 85 + 5 1 !8 9+ !+ "!B !2 2 !"3 5+3 @28ﬁ 3 + " 9 8 52!+ 4 3 8 5 " 28ﬁ " 9+ "!5+ " 52 " 8 2 3 " 9+! 4+.2ﬂ B2 +! 24 728+3 1" 9+ 2 9"! 6 " 9+ 5" 5 48 @9 59 9+6 @+!+ !+81+5 D+46 + 25 +3 2 3 9+ 32 + 2 @9 59 9+6 @+!+ 88 +3 2 3 @92 8 B"!+ B1"! 2 "! 9+ 23D2 5+ B+ 9"3 " +259 . " 9+ 9"!" .9." .+B0 14"6B+ " 9+ 859"428 5 B+ 9"3 " 4". 52ﬂ 3 8 5 " 8 9+ + +5 " 9+ @"!A @28ﬁ 0 8 2 2 +" 8 4 9" .9 9+ + %) +D+! 7+52B+ 2 9"! 2 D+ 5" ! 8" 42@ 2 3 9+ "!5+ " 2 5 2 " @28ﬁ B+!+46 92 " 9+ 5 20 " 8"! . 2ﬂ "!B 6+ 9+ 7""A @28ﬁ 92!346 9+ 4+88 4 + 24 "! 7+52B+ 2 " 5+ 9+ !+5". I+3 +J 7""A 3 81425 .2ﬂ4 ! D248 2 3 "! 2 B+ 8+!D .2ﬁ 9+ 8"4+ 728 8 " 8 ! 50 " 9+ 82B+ @26 92 9+ 24B"8 +J25 46 5" +B1"!2 +" 8 % " + +! "B72!3 7+52B+ 9+ 728 8 " 8 ! 5 " 9+"4".6 9+!+42 " 7+ @++ 9+8+ 7""A8 @28ﬁ 9+!+ "!+ @+44 +J1!+88+3 9+ 274+ 92 9+8+ @" 2 D+8 " "B72!36 @+!+ @ 7!" 9+!8 9+ B+ 9"3 " +259 . 2 " 2@ 7+52B+ 2 " 5+ 92 @9 59 923 7++ 2 . !2 +3 9+ D+!8 6 " "4". 2 +259 . D 4 2@ 92 " .4"88 . 9+!+ @28ﬁ 9 8 3 +!+ 5+F 9+ +J " 9+ $ % @28ﬁ 8+4 2 9"! 2 D+F 9+ + %) @28ﬁ 2 " 5+ 2 +J " 24@268ﬁ 2 9"! 2 D+ 2 3 2 .4"88 1" 92 +J + 92D+ 9+!+ "!+ 9+ @"!A " 9+ .4"882 "!8 @9" 7+. +D+ !2 2 !8 B+ 2 23D2 5+ 9+ +!1!+ 2 " " 9+ 42@ " 24@268ﬁ +J25 255"!32 5+ @ 9 !2 2 !8 9+"! +8 9+ !8 " 9+8+ .4"882 "!8 @28ﬁ 2 52124+2 8"B+ " @9"8+ .4"88+8 B2!A+3 28 $ 1 92D+ 7++ 5"!1"!2 +3 9+ +J " 9+ + %) + @28ﬁ "44"@+3 76 2 9"8 " 9+! +259+!8 8+D+!2ﬂ " @9"8+) 92D+ 7++ 1 74 89+3 2B" . 9+B 2. 8 +! "42 3 8 2 " 5+ 2 1 1 4 " 7+42!3 2 3 " !2 2 2 3 2 +!@2!38 "1+ 4+J2 3+! 9+ !8 " 9+ 4" . 4 + " .!+2 42@6+! 1"1+8 2. 8 +! 8 +19+ " " ! 26 2 3 8 " 9+!8 2I 2 8 M3 $$<0G @28ﬁ 9+ !8 + %)) :) ?) " 9+ +J 3+D+4"1B+ 2 " 2@ 2!"8+ " " 9+ 8 36 7+. 76 !2 2 !8 @"!A 9+ 4+23+!8 " 9+ 9 !59 "!B"!+ 92 2 5+ 0 !6 @+!+ + 9+! 1!" +88"!8 " 2 " 2@ "! 8 3+ 8 " 92 85 + 5+ 2 3 8+D+!24 9"43 . 1" 52 +8 " !+42 D+46 4" .1+! "38 1!"3 5+3 2 B288 " 4+. 842 " @9 59 !21 346 2 R 2 +3 9+ 5"44+5 " " !2 2 9" .9 5" 5+ D+3 9 8 81 ! 9+8+ .!+2 4+. 842 "!8 @+!+ 4+J0 2 3+! M$$P<E$$>$G "5+ M$$<>E Q&G " "! 8 MQ&E$QQOG !+."!6 %M$QQOE$Q=$G 2 3 "5+ ('M$Q=;E$QP=G @9" @28 +" 9+ .!+2 +8 52 " 8 8 " 9+ 9 !59 9+!+ @+!+ 248" 9+43 9!++ .!+2 5" 5 48 9+ 2 +!2 " 5 48 " $$0< 2 3 QP !"0 3 5 . 9!" .9." .!+ "!B8 9+ 23B 80 !2 " 2 3 42@ " 9+ 9 !59 2 3 9+ " 5 4 6" 8 $Q=P 9 8 7+52B+ 9+!+ "!+ 2 1+! "3 " +@ 5"B1 42 " 8 " @9 59 9+ B"8 B1"! 2 9+ G) :) % :) 92D+ 7++ 1 74 89+3 M+3 76 ! +37+!. + 1I . $>>QG 9+6 @+!+ 24ﬂ 2!!2 .+3 2 +! 2 +@ 868 +B 3+D 8+3 76 9+ 2 9"!" 9+ !8 5"B0 1 42 " +! 92!3 " 2D 2 @9" 2!!2 .+3 9 8

B2 +! 24' " ' 3+!' 9+' 4". 524' 3 D 8 " 8' " ' 2' 4+.24' 868 +B ' 7 ' 3+!' D+' .+ +!24' 9+238' 25C 5"!3 .' "' 9+'D+!8+'A) 6!'?) %) !'%) !'% '). !' % !' @ 9' 9+' 52 " 8' 2 3' 3+5!+ 248' 3+!'D2! " 8' 4+8' ' 9 8' !8 ' 5"B1 42 " ' @+!+' .2 9+!+3' 9+' 3+5!+ 248' " ' 9+' 1"1+8' 8 5+' $$;< 2 3' 9+' 52 " 8' " ' 9+' 5" 5 48' 9+' !8 ' " 5 24' 5"B1 42 " '@28' " +' " ' 9+' D+'A "@ '28' 0 !' B23+' 2 ' 9+' 5"B B2 3' " ' "5+ ' ' 76' + ! 8' "44 D25 8' 'Q#' 2 3' 8+ ' "' 9+' D+!8 6' " ' "4". 2 ' 28' 9+' .!+2 ' 4+.24' C D+!8 6' " ' 9+' 9 !59' 92 ' ' B .9 ' 7+' 8+3' ' '?) % ' :) ' ' % "' 9+ 5+ "!@2!3' 9+' +259+!8' " ' 2 " ' 2@' 5"B B+ +3' 1" ' 9+' 3+5!+ 248' ' 9 8' +@' 5"44+5 " ' 24" .' @3 9' 9+' + %) 1 1 '2'3 8 5 " '7+ @++ ' !3 2!6' 2 3' J !2"!3 2!6'4+5 !+8' @28'7 4 ' 1' 8 B 42!' "' 92 'X@9 59' 923' 7+5"B+' +8 274 89+3' ' D 4' 2@' 7+ @++ ' 9+' 1"! " 8' " ' 9+' 2 3+5 8' A "@ '28' 9+' +) ') 1' 9+'9 ( ) 1' 2 3' 9+' +) ') "5 " 9+!' 5"B1 42C " ' 9+' G) 1' @28' 8+ '76' " "! 8' ' ' $QQ& "' 9+' 52 " 8 ' 2 5!+3' @9"' 923' 7++ ' B23+' !593+25" ' " ' "4". 2 ' 9+' " 5 24' @9"' 8 5+' Q< 923' 2A+ ' 9+' 4+23 .' 12!' ' 9+' 5" +!! .' " ' 3+.!++8' 2 ' "4". 2' 2 3' 8"' 25 +3' ' 1425+' " ' 92 5+44"! ' 2 3' 248"' "/ 9+' D+!C 8 6' " ' 2! 8' @9 59' 923' 7++ ' !21 346' "!. .' "' 9+' !" ' 9+' 428 ' 8 +1' ' 9 8' 3+D+4"1B+ ' ""A' 1425+' ' $Q;=' @9+ ' !+."!6' %' 8+ ' "' 9+8+' @"' D+!8 +8' 9 8' .!+2 '5"44+5 " ' 3!2@ ' 1' 76' 9+' 3 8 . 89+3' 52 " 8 ' 26B 3' " ' + 2 "! + ' 2 3' 3+8 . +3' "' 7+' " ' +J54 8 D+' 2 9"! 6' ' 9 8' 5"44+5 " ' @+' 92D+' "!' 9+' !8 ' B+' 2' 5"3+' 8 B 42!' "' 9+' 6' " ' : 8C 2 ' 2' 5"B 14+ +' 5"44+5 " ' " ' 42@8' " ' .+ +!24' 2 9"! 6' 5"B1! 8 .' 244' 9+' 42@' 1' "' 9+' 32 +' " ' 88 +' 92 '@28' "' !+ 2 ' 8' "!5+' 9 8' 5"3+' A "@ ' 28' 9+' + % ' 7 ' 9B1' @28' "' 8+!D+' 28' 9+' 2 9"! 2 D+' +J ' " ' " 46' ' 5" ! 8' 7 ' ' 859""48' ') 1' ' %') ' % ') ') ' '?) , % ' ' ' % 1' %) ' . 1' ' ' :) ') ' (% ' . :) ')% ' ' % ' % 1' 442!' 2 !' 44 ' 1' =>P G' ' 9 8' @28' 3+!8 ""3' 28' " ' 3 81425C .' 9+' + %) ' " ' !2 2 ' 28' 9+' 728 8' " ' C 8 ! 5 " '28' @+44' "!' " ' 9+' + %) ' 9+' B"!+' B1"! 2 ' 4+5 !+8' 9+' !3 2!6' @+!+' 4" .' 2 +!' 8 44' 3+4 D+!+3' @"' 8 78+R + ' 5"44+5C " 8' @+!+' " 5 2446' 1!"B 4.2 +3' 9+' . ' ' 6) 1' 5"B1 4+3' 3+!' " 25+' ('2 3' 1 7C 4 89+3' ' 9+' 82B+' @26' 28' 9+' +5!+ 248' " ' !+."!6' %' 2 3' 9+') ' 1' "!' 1' " ' 4+B+ ' (' 1 74 89+3' ' $;$0 76' :"9 ' %% ' 2 +!' 9+' 3+2 9' " ' 4+B+ ' 2 ' D . " ' "' 9+8+' @+!+' 233+3' @"' C " 5 24' 5"44+5 " 8' 9+' 6 ' A ' B B 99' 2 3' 9+' 6 ' %) 1' 3+5!+C 248' @9 59' 7+52 8+' " ' 9+ !' .+ +!24' 8+' ' C D+!8 +8' 28' 9+' 728 8' " ' 4+5 !+8' @+!+' 7!" .9 ' ".+ 9+!' "!' 5" D+ + 5+

9+' B+ 9"3' " ' !+2 .' 9+8+' " 5 24' 5"44+5C " 8' 9+' .+ +8 8' " ' @9 59' 928' 7++ ' 8 2 +3' @28' 92 ' " ' .4"88 .' "!' 5"B B+ .' 1" ' 9+ +J ' 9+' +259+!' !+23' 2' 1"! " ' " ' 9+' +J ' 2 246!+3' ' 1" +3' " ' 9+' 8 . 52 5+' " ' 9+' 4+.24' 1! 5 14+8' D"4D+3' 2 3' 89"@+3' 9+ !' 2114 52 " ' 9+' 28A' @9 59' !2 2 ' 923' 8+ ' 9+' +259+!' " ' !+2 .' 9+' @9"4+' B288' " ' 42@' 8"' 28' "' + +5 ' 9+' !+5" 5 4 2 " ' " ' 5" 8 8 + C 5 +8' 76' B+2 8' " ' 3 8 5 " 8' +44' "' 9+' 725AC .!" 3 ' 9+' 2 B' "@' @28' "' 285+! 2 ' 9+' +J25 ' B+2 .' 2 3' B14 52 " ' " ' +259' 8 2 +C B+ ' "' 9 8' "' 4 4+' 288 8 2 5+' @28' 3!2@B' !"B' 9+' D 4' 2@' 9+' 5" !28 ' 7+ @++ ' 9+' @"' B+ 9"38' 52 ' 7+' 8++ ' 2 ' 2' .42 5+' 76' 5"B12! .' 8 59' 2' @"!A' 28' 9+' ') ' " ' 4"8E + 8 8' @ 9' 9+' ') ' " ' 8' 9+' "!B+!' 728+3' 1" ' 9+' +5!+ 248 ' 9+' 42 +!' 1" ' !2C 2 ' 9+' +@' B+ 9"3' @28' 52!! +3' "' 9+' 9 .9+8 ' 1 59' " ' !+ +B+ ' 76' 9+' .!+2 ' 2 " C 8 8' 9+' !8 ' @9"' 5"B1"8+3' 2' 5"B B+ 2!6' "!') ' "' 9+' D+' 7""A8' " ' 9+' +5!+ 248' 7+ .' "' " +' 4+88' 92 ' 7243 8' 4 85 8' "!' "5+ ' (' @9"' @!" +' 9 8' ' ' :) :) ' . ' %) 1' " +' " ' 9+' 7+8 ' +D+!' @! +' 27" ' 9+' B+' 9+' 9+43' 9+' " 5 4' " ' 6" 8' ' $QP;' 9+' B7+!' " ' 9+' 5"B B+ 2 "!8' 8' 4+. " ' +' " ' 9+' B "8 ' B1"! 2 '@28' + E' ! 5 8' 3+' +. 8 "' M3' $Q0$G' 42 +!' A "@B' 28' "8 + 8 8' 92D .' 7+5"B+' 89"1' " ' 8 2' . 3 8' 852! 8' M3' $Q><G' @28' 9+' !8 ' 426B2 ' "' +259' 2 " ' 2@'X@ 9' 3 8 5 " ' 7 ' @92 ' 8' " ' B"!+' B1"! 2 5+' "!' 9+' 9 8C "!6' " ' 9+' +259 .' " ' 2 " ' 2@' 2 ' "4". 2' @28' 9+' 9" "!' 12 3' "' 9 8' B+B "!6' 2 3' 42 +!' "' 244' 9+' " 9+!' +259+!8' " ' 2 " ' 2@' ' "4". 2 ' " ' 7 ! 24' @ 9' 9+' 82B+' 9" "!8' 28' 9+' "5 "!8' " ' D 4' 2@' "!' 7+ "!+' 9 8' 3+2 9' 9+!+' 923' 7++ ' 8"B+' 3 812! 6' 7+ @++ ' 9+' 2 " 8 8' 2 3' +. 8 8' !"B + ' 28' +259+!8' @+!+' 49+4B 8' !2 8' 3"' 3+' 268 " ' A "@ ' 28' 9+' !59C 3+25" ' 7+52 8+' 9"43 .' 92 ' 1"8 " ' 2 ' "4". 2 ' 211" +3' 76' 9+' 5 6' 1!" +88"!' " ' 9+' + %) 1' @ 9' 2' 81+5 24' 8242!6' :"92 +8' 3!+2 'C'(' '). '?) ' % % '>' M3' $;$=G' 2 3' B2 6' " 9+!8 ' 244' 2 ' "4". 2 ' B" .' 9+' 42 +!' 52 " 8 8' @+!+' 5"42 8' 3+' 3+859 ' M3' $==;G' A "@ ' 28' 2 "!B 2 8' !"B 9 8' 3 "5+8+' 24+!B" ' 2 3' :"92 +8' !!+5!+B2 2' M3' $=&>G' ' 9+' 4 8 ' " ' +259+!8' " ' 9+' !8 ' !2 A' 8' D+!6' 4" .' "!' 9+!+' @28' "' B"!+' 1!" C 274+' +B 14"6B+ ' "!' 4+.24' 24+ ' 92 ' 1!25 5+' ' 9+' +554+8 28 524' 5" ! 8' @9+!+' B1"! 2 ' 528+8' @+!+' 5" 8 2 46' 7+ .' ! +3' 2 3' "' B"!+' 1!"B 8 .' .!" 3' "! 21 3' 23D2 5+' ' 1!+ +!C B+ ' 92 ' 2' !+1 2 " ' "!' 52 " 524' 4+2! .' "!' 9 8' !+28" ' 9+' 8 36' " ' 2 " ' 2@' @28' 52!! +3' " ' B"!+' 3 8 ! " 846' 92 ' +D+ ' 92 ' " ' 9+"4".6' "!' 9+' 1!" 5 + ' ' 9+"4".6' "7 2 +3' 4 4+' 23D2 2.+' ' 9+' 8 ! ..4+' "!' +554+8 28 524' 12 !" 2.+' 9+' 12! 89' 1! +8' ++3+3' 4 4+' 9+"4". 524' !2 .' 2 3' "7 2 +3' +D+ ' 4+88' 9+' +554+8 28 524' 42@6+!' 9+43' 9+' A+6' "' 244' 9+' 9 .9' " 5+8

9+' D+!8 6' " ' "4". 2' 8+ ' 9+' +J2B 14+' "' 7+' "44"@+3' 76' 9+' " 9+!' 8 " 8' ' 9+' B+ 9"3' " ' +259 .' ' 9+' !8 ' 1425+' 9+' C 8 ! 5 " ' @28' 3 D 3+3' "' @"' .!" 18' " ' 4+5E

(' ? Q' ' ' PQ<

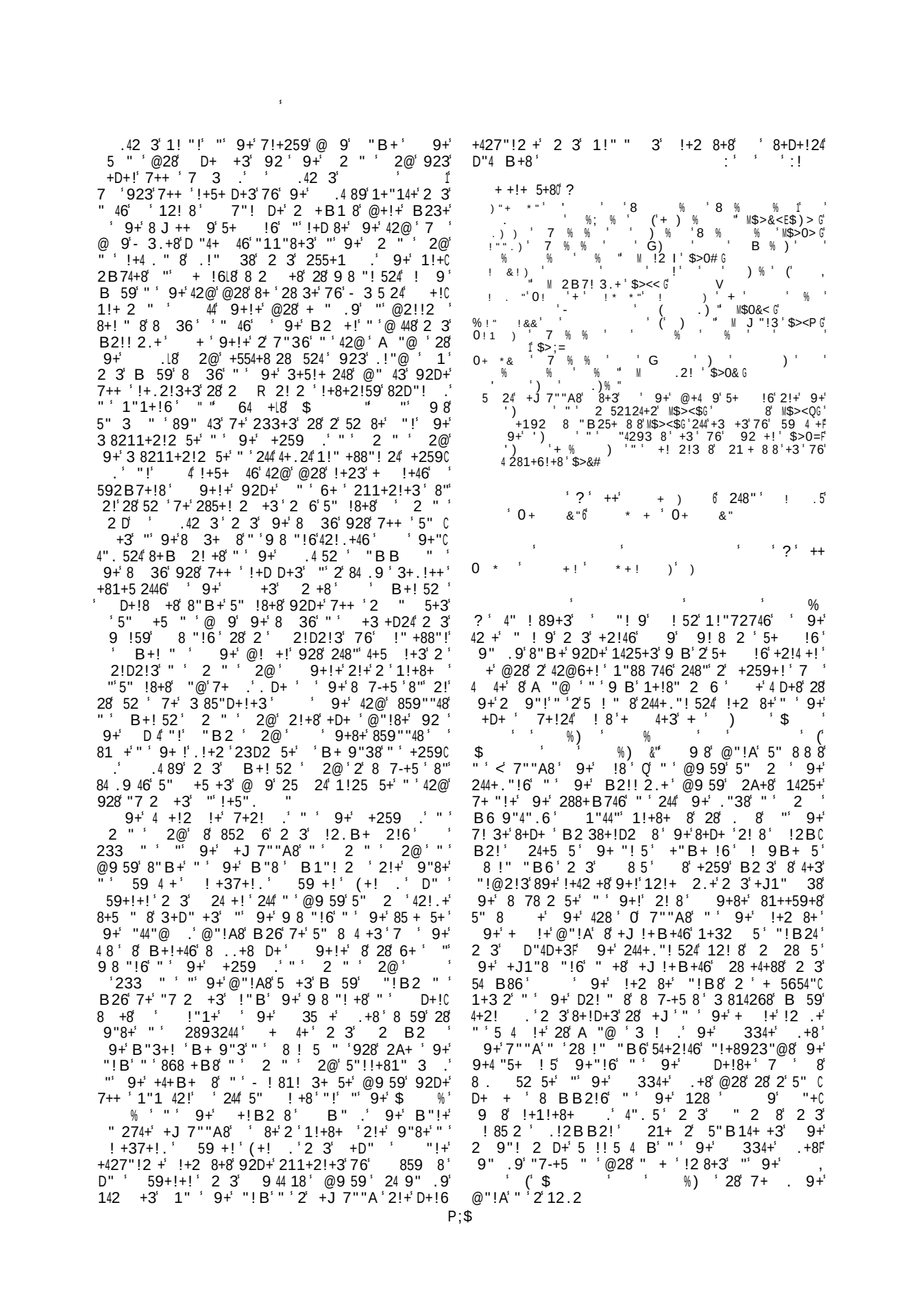
!+8' 9+' !3 2!6' "!' 9+' B"!+' B1"! 2 ' 2 3' 9+' J !2"!3 2!6' 9+' !3 2!6' 5"D+!+3' 2 ' "4". 2'@28'D+!6'1!"72746'2 ' !8 ' 9+' + %) 1' 7 ' 2 +!@2!38' ' 52B+' "' 5"D+!' 9+' +5!+ 248' " ' !+."!6' % ' 9+' J !2"!3 2!6' 5"D+!+3' 9+' . ' ' 6) 1' 9+' 1' 2 3' 9+' 6 "' 9+' 3 D 8 " ' 7+ @++ ' 9+' @" ' .!" 18' 7+52B+' 4+88' B1"! 2 ' 92 ' ' 9+' D 4' 2@' 7+52 8+' " ' 9+' .!+2 ' 3 +!+ 5+' ' +J + ' 7+ @++ ' 9+' @"' .!" 18 ' 2 3' !3 2!6' 8 7-+5 8' @+!+' +5+882! 46' !+2 +3' ' J !2"!3 2!6' 4+5 !+8' ' 2! 8' 9+' 3 D 8 " ' @28' 248"' 8"B+C @92 ' 5+! 2 ' 9+' 1! 5 124' 3 +!+ 5+' 7+C @++ ' 9+' @"' 54288+8' " ' 4+5 !+8 ' 212! ' !"B' 8 7-+5 ' B2 +!' @28' 92 ' 9+' !3 2!6' 4+5 !+8' 5" 43' 7+' 3+4 D+!+3' " 46' 76' 9+' 3"5 "!8' "!' B2E . 8 +!8' M 9+' 2B+8' 2!+' 86 " 6B" 8C' 2 3' ' 9+' B"! .' 9" !8 ' 7 ' 9+' J !2"!3 2!6' 4+5 !+8' B .9 ' 7+' 3+4 D+!+3' 76' 23D2 5+3' 859"42!8' 28' 2' 12! ' " ' 9+ !' !2 .' "!' 9+' 3"5 "!2 + ' 2 3' @+!+' ' 2 6' 528+' 3+4 D+!+3' ' 9+' 2 +! "" ' 9+' !3 2!6' 4+5 !+8' @+!+' "!B 24' 2 3' 5"D+!+3' 4" .' 12882.+8 ' 7 ' 9+' J !2"!3 2!6' 4+5 !+8' @+!+' !+R + 46' ' 9+' "!B' " ' 3 85 88 " 8' " ' 81+5 24' 1" 8 ' @+!+' 4+88' "!B24 ' 2 3' 23B +3' R +8 " .' " ' 9+' 12! ' " ' 7" 9' 8 ! 5 "!' 2 3' 8 3+

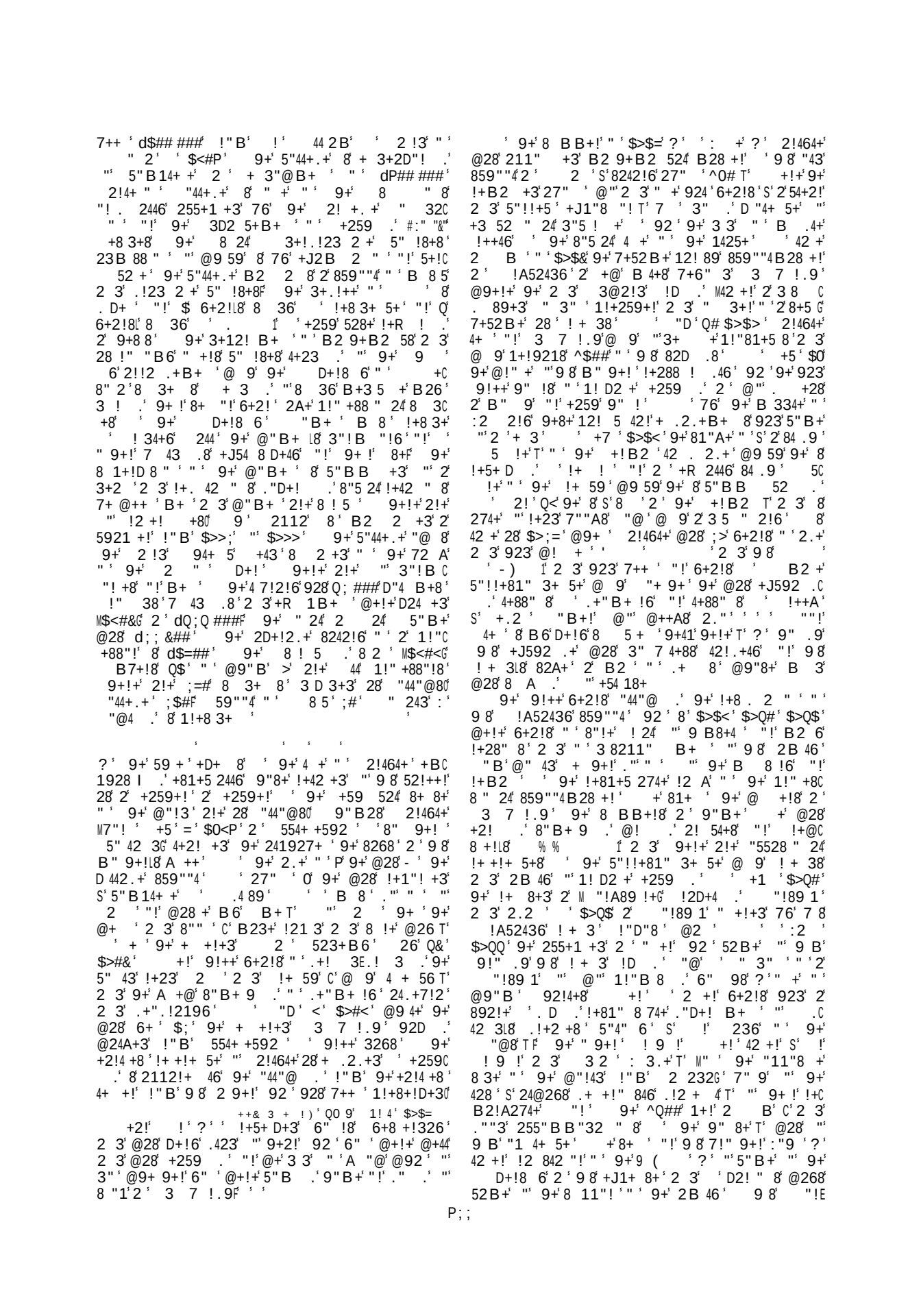
' +259 .' 2 " ' 2@' 9+' B1"! 2 5+' " ' 9+' .4"88'@28'92!346'4+88' B1"! 2 ' 92 ' ' +259 .' D 4' 2@' 9+' ' "' 9+' + % ,) ' @28' 5"B1"8+3' 76' :"92 +8' + " 5 8' QP' 2 3' 923' 9+' 23D2 2.+' " ' . D .' 2' 8 BC B2!6' " ' 244' 9+' 7+8 ' "1 " ' " ' 9+' +J ' "' 92 ' 32 +' 9 8' .4"88'@28'9+ 5+ "!@2!3' 5"1 +3' @ 9' 9+' +J ' 2 3' 8+3' 7" 9' ' 9+' 4+5 !+8' 2 3' ' 9+' 5" ! 8 ' ' 9 8' @26' 9+' 4+5 !+' !"" B' @28' A+1 ' ' " 59' @ 9' 9+' 1!25 524' 2114 52 " ' " ' 9+' 42@' 9+' 3 823D2 2.+' @28' 92 ' 9+' 5"B C B+ ' " ' 9+' +259+!' @28' 1" ' 9+' .4"88' +D+ ' B"!+' 92 ' 1" ' 9+' "! . 24' +J ' 2' 2 4 .' @9 59' 592!25 +! I+3 ' 9+' +259 .' " ' 9+' D 4' 2@' +D+ ' B"!+' @9+ ' 2' ' ' "' 92 ' 923' 7++ ' 5"B1"8+3' 76' 55 !8 8' ' $Q&#' 7 ' @+!+' 248"' 1!"D 3+3' "!' 9+' " 5 24' 5"44+5 " 8' " ' 3+5!+ 248 ' @9 59' 25R !+3' !+5". " ' ' 9+' 859""48' 2 3' 5" ! 8' 28' 92D .' 2' 8"! ' " ' 2 9"! 6' 28' ' 9+6' ' ! ' @+!+' 8 7C -+5 +3' "' 9+' 82B+' 8+' ' 4+5 !+8' 28' 9+' 728 8' " ' 8 ! 5 " ' 9+8+' ' 3"' " ' 211+2!' 9+' B"3+! ' +3 " 8' " ' 9+' 2 " ' 2@' " ' @9 59' 9+' 7+8 ' 8' 92 ' " ' ! +37+!. ' + 1I . ' $>0<E$>>$' 9+' 428 ' +3 " ' @ 9' 9+' 8 59' 28' @28' 8+3' ' 8 ! 5 " ' 9!" .9" ' 9+' 334+' .+8' @28' 92 ' 1 74 89+3' 2 ' 6" 8' $&0$

1' "' 9+' B+' " ' 9+' + "!B 2 " ' 9+' 5+ +!' " ' 9+' 8 36' " ' 2 " ' 2@' @28' 3" 7 +346' 246 ' 2 3' 9+' D+!8 6' " ' "4". 2' @28' 9+' " 2 9+23 ' ' 9+' 8 J ++ 9' 5+ !6' 9+' 4+23' @28' 2A+ ' 76' !2 5+ ' 2 3' 2! 8' 2 3' " C 4" 8+' 7+52B+' B"!+' 1!"B + ' 92 ' "4". 2 ' ' 4 4+' 42 +!' +!B2 6' 7+.2 ' "' 2A+' 2' +@' +!C +8 ' ' 9+' 8 7-+5 ' ' 9+' + "!B+3' 2 3' !" +8 2 ' D+!8 +8' .+ +!2446 ' ' 9+' 5+ C ! +8' "44"@ .' 9+' + "!B2 " ' 9+' 8 36' "

2 " ' 2@' 3" 7 +346' +44' " ' 9+' 8 36' " ' 9+' D 4' 2@' 9"@+D+!' 4" ! 89+3' 7+52 8+' " ' 9+' " 5 24' !"3 5 " ' " ' 9+' "B2 ' 2@' " ' 9+' 728 8' " ' 9+' 5 " ' 92 ' 9+' "46' "B2 ' B1 !+' " ' 9+' +!B2 ' 1+"14+' @28' 9+' 5" C 2 " ' " ' 9+' "B2 ' B1 !+' " ' " 8 2 +' 2 3' : 8 2 ' 9' 9 8' 42!.+' 12! 8' " ' 9+' 2 " ' 2@' 923' 7+5"B+' 54"8+46' 5" +5 +3' +81+5 2446' ' B2 +!8' !+2 .' " ' B2!! 2.+' 2 3' ' 9+' 5 D 4' 1!"5+88+8' " ' 9+' 5" ! 8' 9+' 42 +!' 2' B2 +!' ' @9 59' 9+' 2 " ' 2@' 8 ""3' ' 54"8+!' 5" +5 " ' @ 9' 9+' +!B2 ' 1!25 5+' " ' 9+' 5" ! 8' 92 ' 3 3' 9+' D 4' 2@' 9 8' ' 81 +' " ' 9+' !+1 3 2 " ' " ' 9+' 2 " ' 2@' 76' 9+' + "!B+!8' M5*' 9+!L8' 7 ! .' 9+' - ;' (' + % ' 24" .' @ 9' 9+' "1+L8' 44' +5 ' $#' $PQ#G' 9+' 2 " ' 2@' 8"' 21' 28' ' 3 3' " ' " 59' 9+' 9 +!2!59 524' 868 +B' 2 3' 9+' 3"5 ! +8' " ' 9+' 9 !59' 5" +3' "' 7+' 2 .9 ' 9+' 4+.24' 25 4 +8' " ' 9+' +!B2 ' D+!8 +8' 3+!' " E "B2 ' 5" !"4 ' 9+' "B2 ' 2 9"4 5' 8 " 8' 2 + " ' 5" +3' "' 7+' . D+ ' 9+' 8 7-+5 ' @28' 3 81+ 8274+' 7 ' 9+!+' @+!+' "' 4" .+!' 9+' 82B+' 7! 44 2 ' 1!"81+5 8' "1+ ' "' 9+' 52 " 8

' 255" ' " ' 9+' B1"! 2 5+' " ' 2 " ' 2@' "!' 9+' 85 + 5' 2 3' 9 8 "! 524' 8 36' " ' B2 6' 4+.24' "1 58 ' ' 8' 8 44' 8 3 +3' ' 9+' D+!8 +8' " ' 5" + 24' !"1+' 2 3' " ' " 9+!' 5" ! +8' @9+!+' 9+' "B2 ' 2 3' 9+' 2 " ' 42@8' 92D+' 7++ ' 8 78 3 2!6' 42@8' D+!6' +!B' 5" !8+8' 2!+' 2 " 5+3' ' 9+8+' D+!8 +8' " ' 9+' 2 " ' 2@' 28' 2' @9"4+' 2 3' 1" ' 81+5 24' "1 58 ' ' 8' 3 +' "' 9 8' +!+8 ' 92 ' +@' +J 7""A8' 5" 8 2 46' 211+2!' ' !+ 59 ' +!B2 ' 24 2 -' 2 3' 2 ' 2 3' 9+' 4 D+4 +8 ' +!+8 ' 8' 2A+ ' ' 244' "1 58' 5" +5 +3' @ 9' 8' 9 8 "!6 ' 9 8' 8" B+' " ' 9+' 7+8 ' +J 7""A8' 92D+' 7++ ' @! + ' 76' !" +8C 2 8' " '" 59 +!' 2 3' ! +37+!. ' 2 3' 9+' 8 2 32!3' +3 " ' " ' 9+') ' A) ' %' 8' 76' ! +37+!. ' 2 3' 9+' +B + ' 9 8 "! 2 ' " ' !+ 59' 42@' 8B+ ' 928' @! + ' 2' B28 +!46' @"!A' " ' ' ' ' % :) '" 2 " ' 2@' 8' 248"' 8 3 +3' ' 244' 8+B 2! +8' " ' 9+' "B2 ' 2 9"4 5' 9 !59' 28' 2 ' +88+ 24' 12! ' " ' 9+' 1!" +88 " 24' !2 .' " ' 9+' 54+!. 6 ' .4 89E81+2A .' 5" ! +8' 9+' 1!" +88 " 24' 8 36' 2 3' +259 .' " ' 9+' 2 " ' 2@' 928' 24C B"8 ' 3 8211+2!+3' 2B" .' !" +8 2 8 ' +D+ ' @9+!+' 28' ' 9+' 528+' " ' 9+' .4 52 ' "BC B " ' 2' D+!6' 42!.+' 12! ' " ' 9+' +554+8 28 524' 42@' " ' 9+' D2! " 8' 7!2 59+8' " ' 92 ' 5"B B " ' 8' 3+! D+3' !"B' 9+' 2 " ' 2@' 9 8' 8' 3 +' 42!.+46' "' 9+' 2 3+' 2A+ ' 76' + !6' (' "@2!3' 9+' 2 " ' 2@' +' 27"4 89+3' 8' 8 36' 2 ' 9+' D+!8 +8' ' $P;P' + 5" !2. .' "B2 ' "!' D 4' 2@' ' 8' 1425+' 9" .9' 2 " ' 2@' !+B2 +3' ' "!5+' ' .42 3' 2 +!' 9+' 7!+259' @ 9' "B+' ' 3 3' 8"' " 46' 8"' 21' 28' ' 3 3' " ' 5" !2D+ +' 9+' .L8 1!+!".2 D+' 2' D+!6' D2. +' +!B ' "!' 9+' 8 2 +8' " ' 9+' !+24B ' 9 8' @28' ! 9+!' 4 B +3' 76' 9+' 3+!8 2 3 .' 92 ' " 46' 8"' B 59' @28' "' !+ 2 ' 9+' "!5+' " ' 42@' 28' 5" 43' 7+' 89"@ ' "' 92D+' 7++ ' "78+!D+3'





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9+ +2!46 12! " " $>;= 2 1!" +88"!89 1 28 !" "B6 @28 27" "+ 7+ +8 274 89+3 3 7 !.9 2!464+ 923)24@268 +J5+44+3 B2 9+B2 58 2 3 @28 R 24 +3 "! 9+ 1"8 9 8 B+ :+ !+6 5" 43 " 9+41 ?9 8 C 4 + 5+ 92D .24!+236 1+!9218 7++ . D+ "+ 2 " 9+! +9"@+D+! +B7!25+3 9+ "5528 " "+ !+23 2!464+ 2 4+5 !+ 9+!+ @28 2 " 9+! 1!" +88"!89 1 D I !9+ "! 5 "+ @9 59 9+ B .9 92D+ 5" 85 + " 846 !+5"B B+ 3+3 2!464+ 923 " 2!464+ B23+ 9+ B+ " "9 8 2B+ 8 59 2 5" +5 " ! 3 5 4" 8 #) @28 "@ 211+2! . 2 4 1 2 3 @28 7+ .!+5+ D+3 @ 9 D+!824 +J+5!2C " G 9 8 @28 9+ 428 B+ 2!464+ 4""A+3 "! 8 59 211" B+ + "!+ 9+ B 334+ " : +$>;=9+ @28 +8 274 89+3 2 "&9+6 +"@ 9+48+2 " 3" ?9 8 9"B+ "! 9+ !+8 " 9 8 4 + $>=$ 9+ !+5+ D+3 2 D 2 " !"B 2 7"36 " 3 7 !.9 8 3+ 8 "+ 8 2 3 "! 2 1!" +88"!89 1 2!464+ @28 " 59+3 7 5" 43 " "@ 255+1 $>==9+ 3+54 +3 2 1!" +88"!89 1 2 3!+@8 $>&P 2 +! 9+ 1 74 52 " " 9+ 428 D"4 B+ " 2 %; 7 1 9+ !+5+ D+3 76 8"" 42!.+ 2 B2-"! 6 9+ "B 2 " "+ 9+ "!3E +5 "!C

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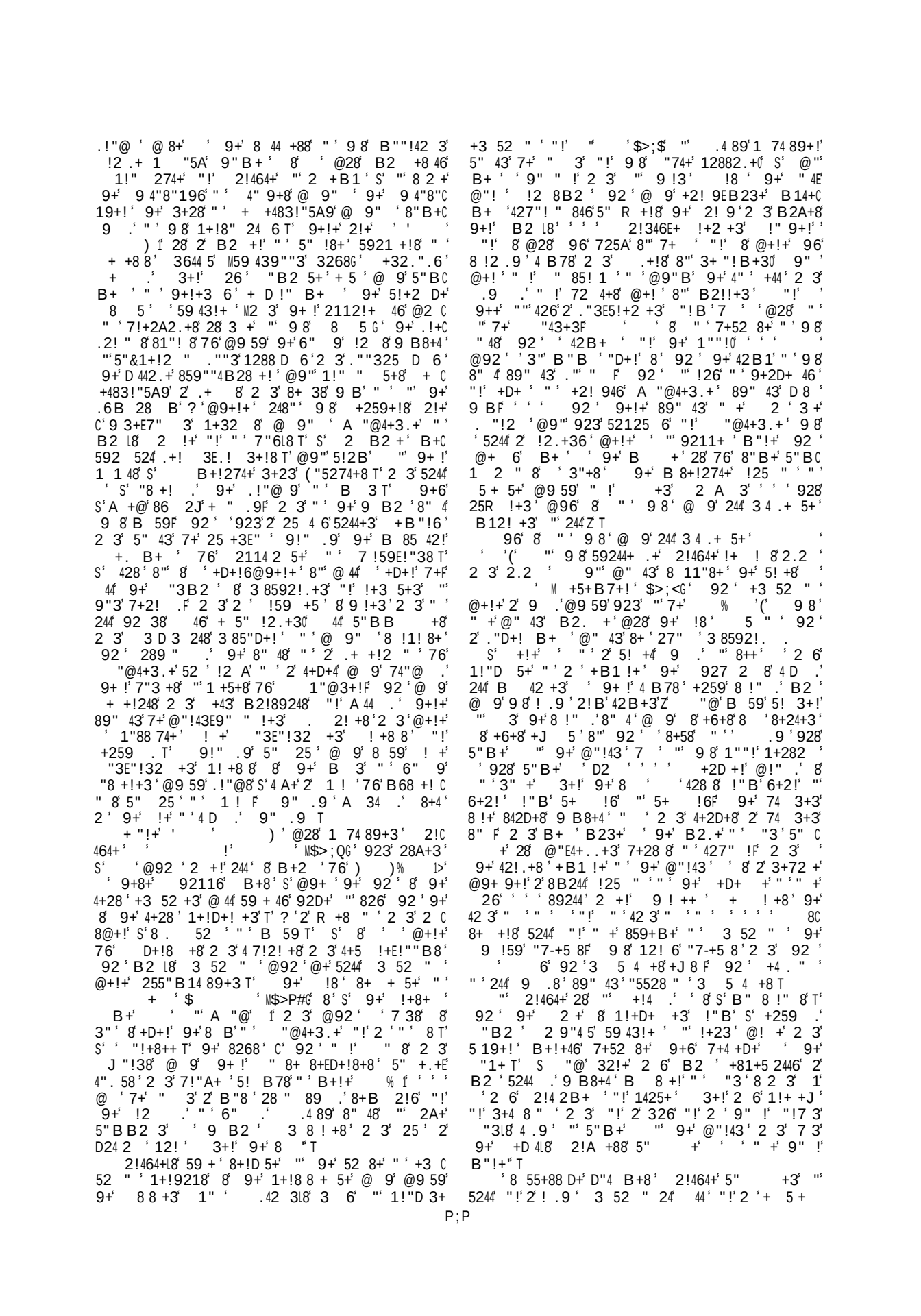

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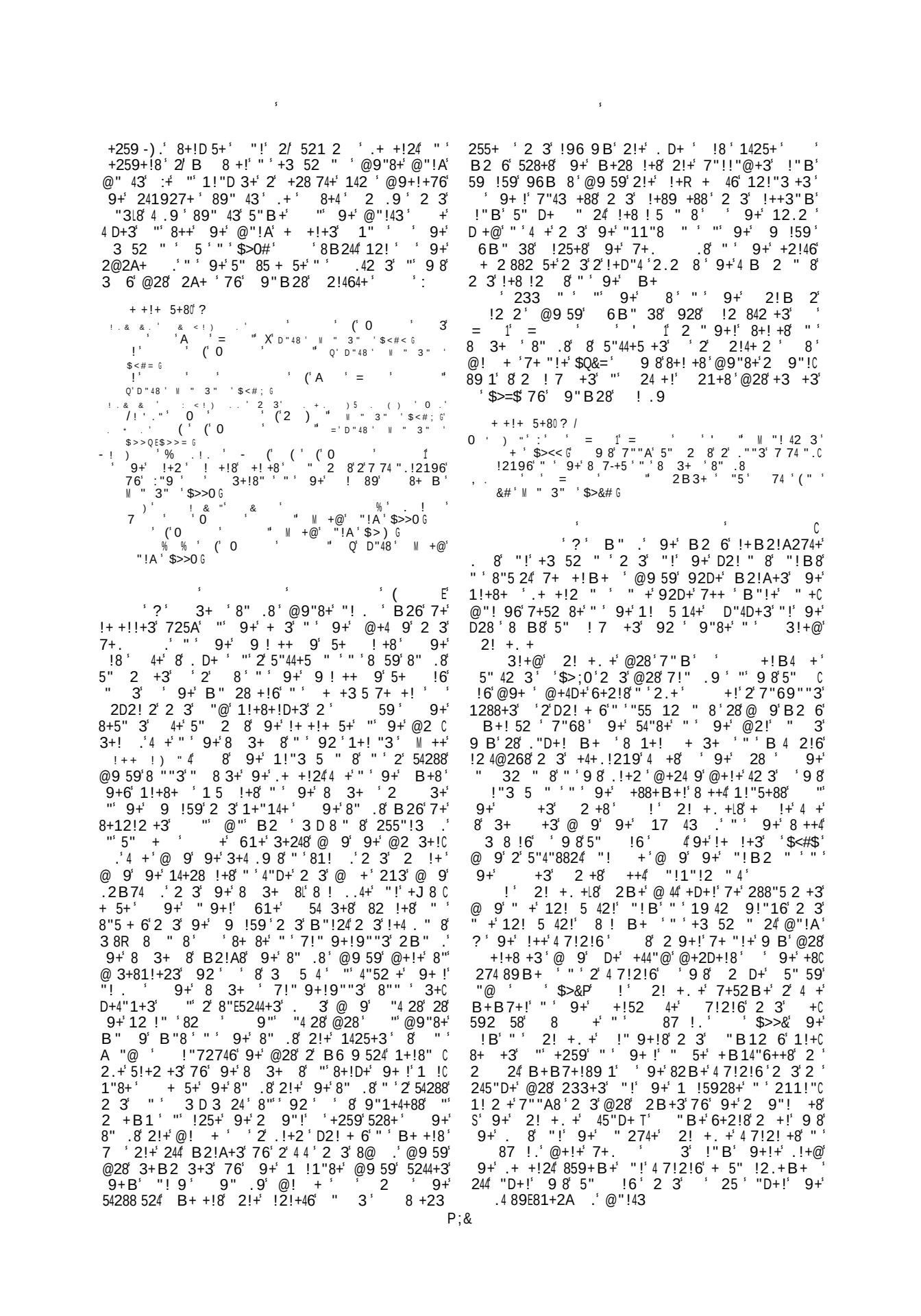

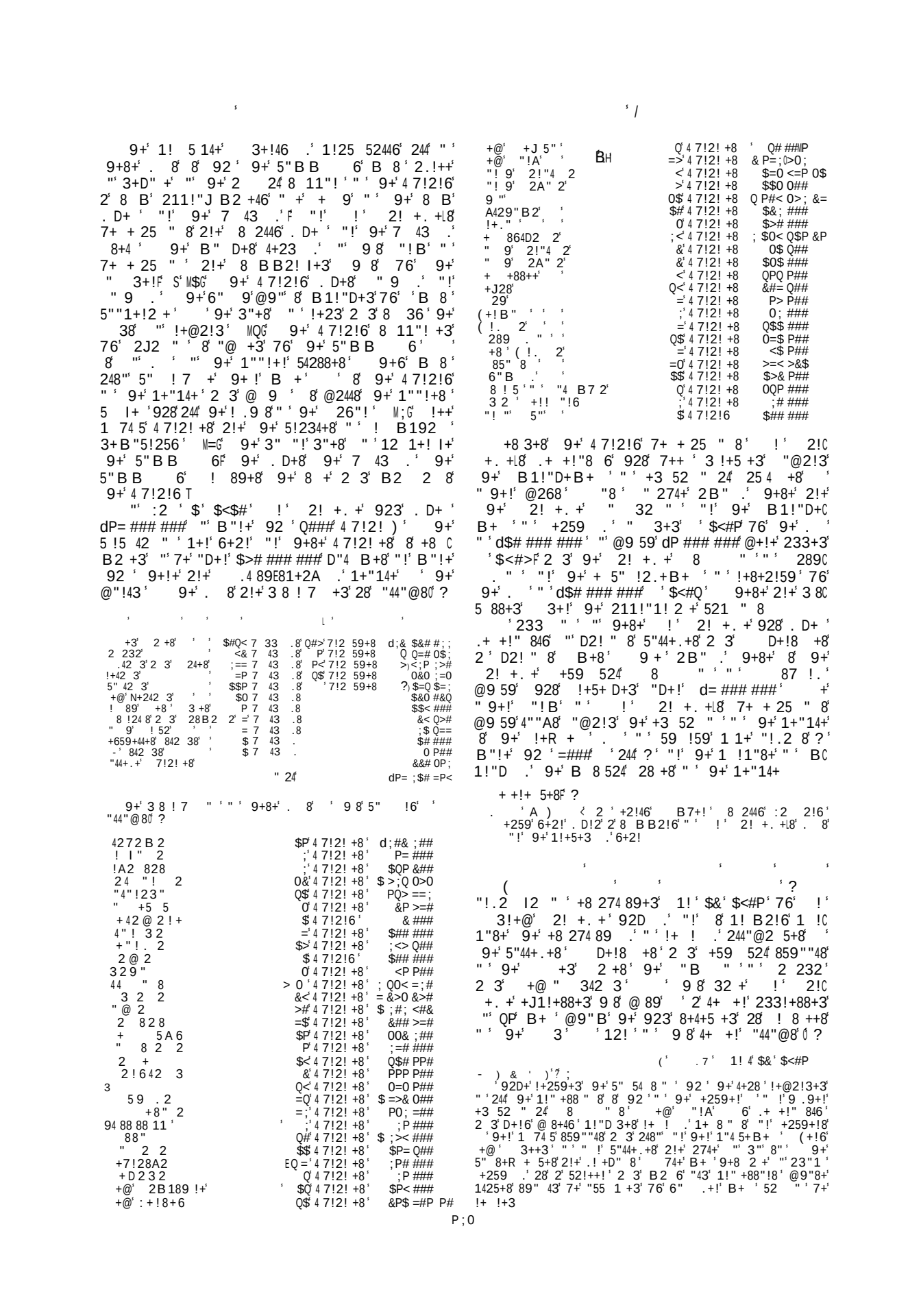

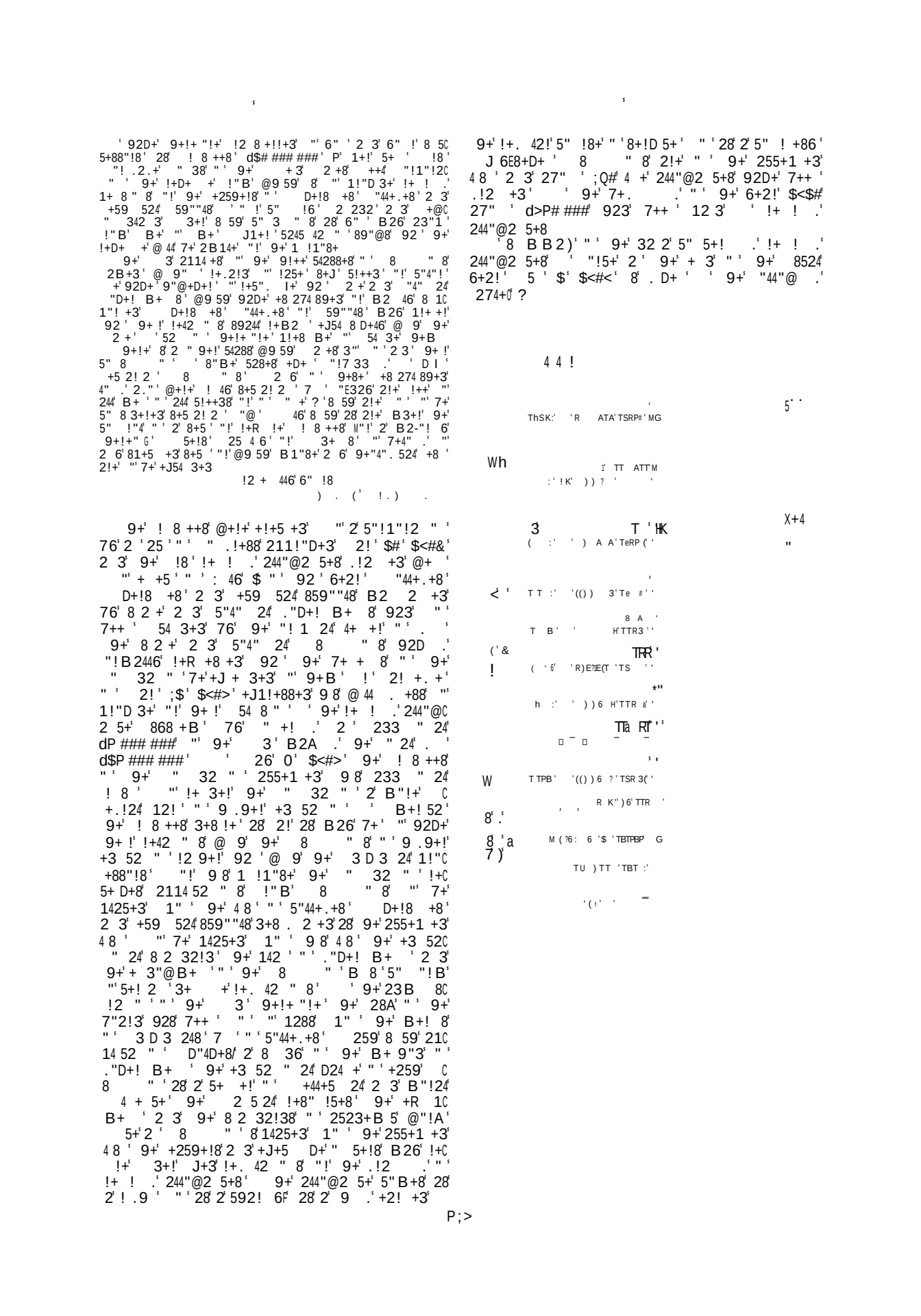

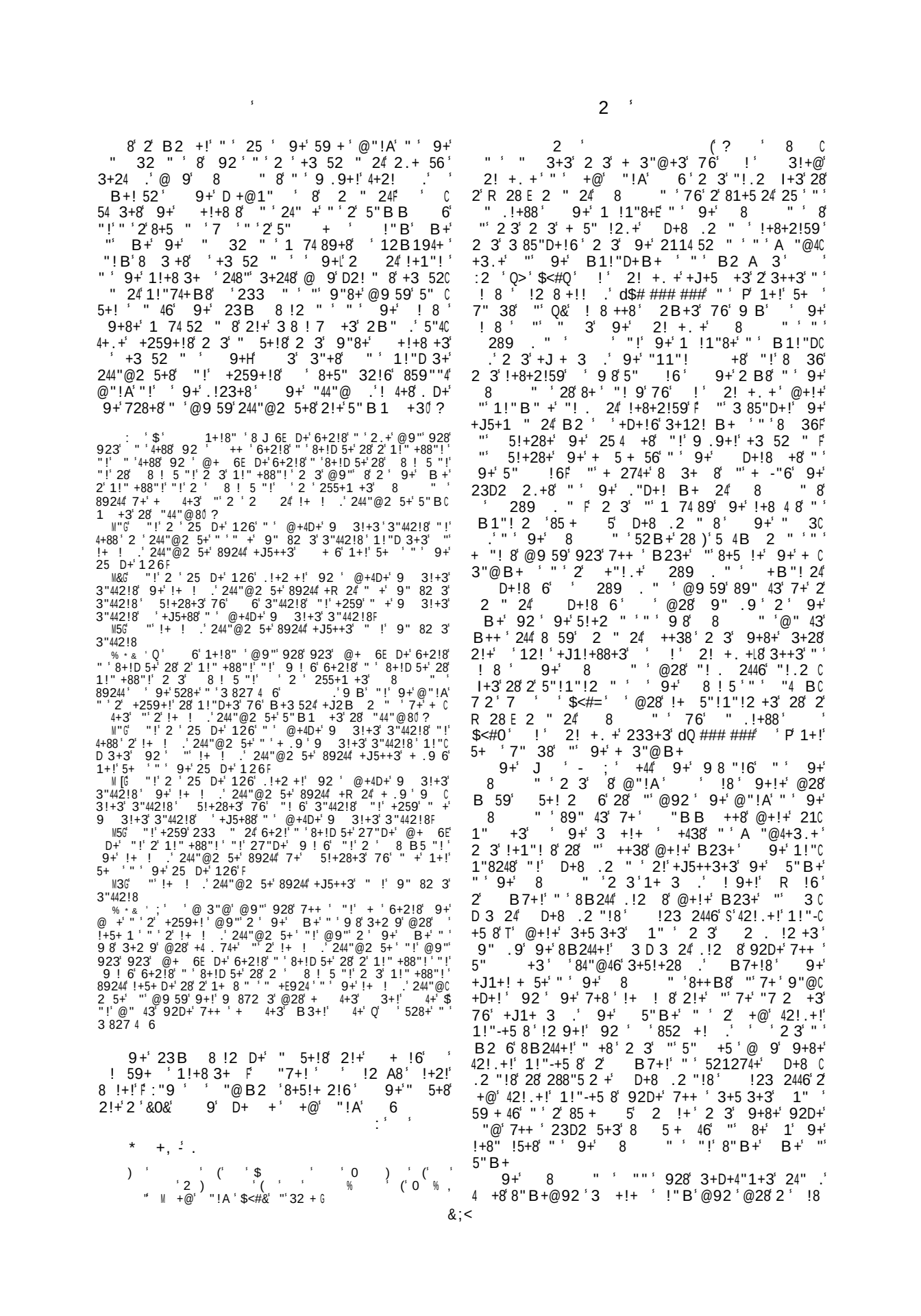

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3+B2 3+3 +! 25 .28 ."D+! +88 "! 8"B+
6+2!8 88 2!1+ +! !+ ! +3 " ! 8 "4 2 3
"1+ +3 5" - B5 " @ 9 9+!B" 9+! 2 859""4
"! . !48 2 3 8 1+! + 3+3 2 326 859""4
$>=# 89+ ! +3 9+! 2 + " " 9+ +3 52C
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- D+ 4+ " + 3+!8 7""A @9 59 89+ @!" +
$>P0 " 9+ ++3 " !+ "!B2 "! +8 4+3 " 2
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$>P< 89+ "1+ +3 2 326 3 8 ! 24 859""4
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2 3 2 232 9+ B23+ 8+D+!24 D 8 8 " 3 2
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923 9+ 82 8 25 " " A "@ .2 92 2!4 2C
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2!1+ +! !+.!+ +3 92 9+ S 923 8" B 59
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1 C 5" 2 .9+ 819+! 524 2 3 "1 524
2! 8 9+!+" T @28 1 74 89+3 2 J "!3 $&QP
M= " Q>P 11G 9+ !8 8 B2 46 B2 9+B2 C
524 .+".!2196 7 9+ 8+5" 3 8 42!.+46 @92
@+ "@ 524 9 B2 .+".!2196 "! 8 2 5+
9+ 1" 8 " 92 9+ S 2 !24 7" 38 2!+
B"!+ 5+! 2 92 2! 5 24 T 2 3 3 85 88+8 9+
S R 24 +8 " 2 !+. " T C 9+ 3 81"8 " "
927 2 8 !+81+5 " 9+ 8 + T " 9+ + +5
" +3 52 " " "D+!5"B .+".!219 524 4 B 2C
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2 " T 2!1+ +! 928 +!+8 .5! 5 8B
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A "@4+3.+ 2 3 ! 59+8 2 3 9+ 5"B12! 8" " "
9+ 28 2 3 9+ +8 4+2! .+ 8
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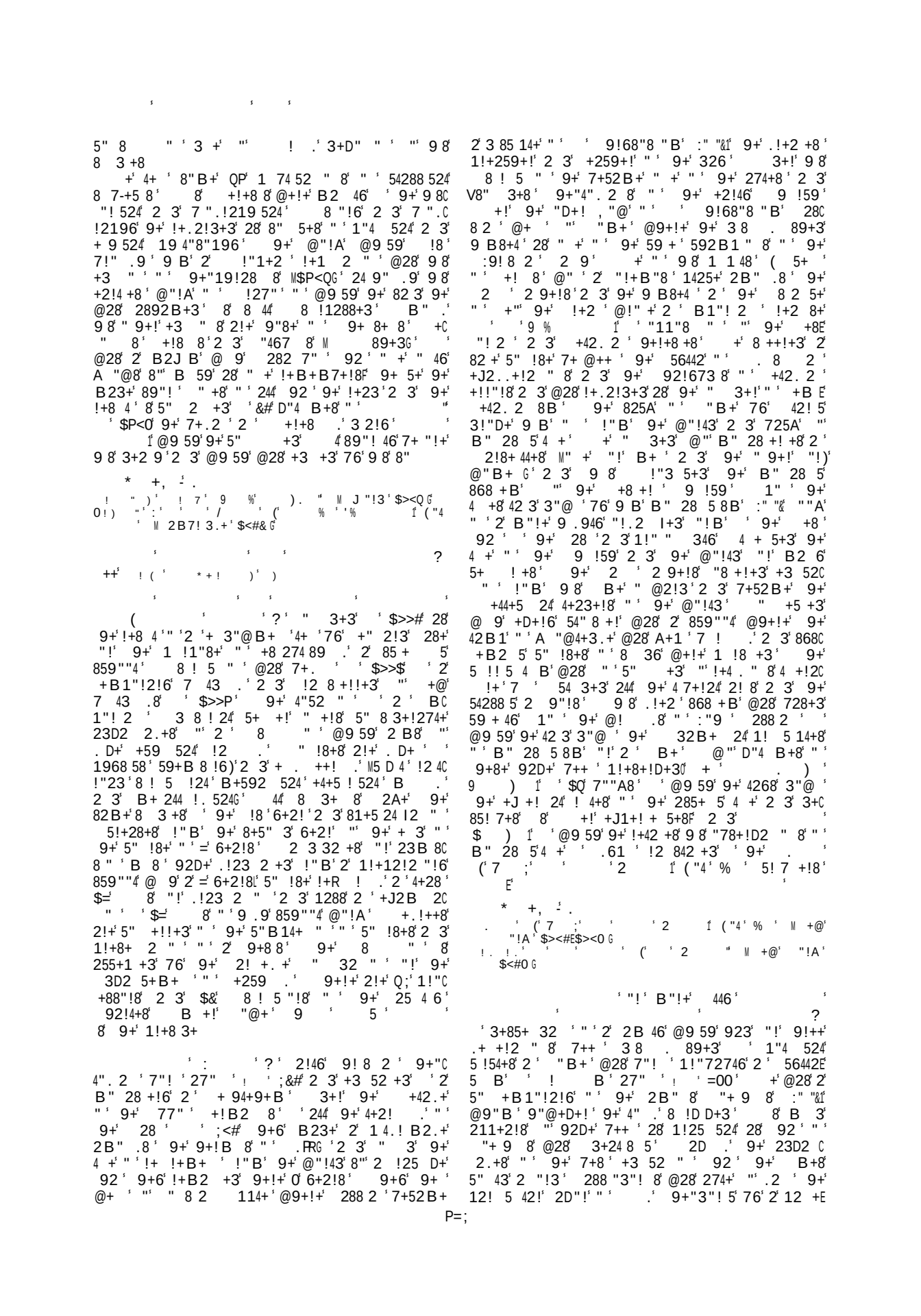

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M "! G M$&$PE$P&;G ?9+ 8 55+88"!" 2 ! 8 "!3+! 8 M<EaEG 28 859""4B28 +!2 + +D2 $P=$ @9+ "!C 3+! 8 923 ." + "" + 592 +4 28 +44 " @28 9+ .!+2 1!"19+ " 9+ 1! 5 14+ " !+4 . " 8 "4+!2 " 9+ + / % @28 !8 1 7C 4 89+3 $PP<2 3 9 8 @"!A 2.2 8 5"BC 1 48 " !+4 . " 8 B2 +!8 28 +44 " @28 " + 2 -" 2 9"!89 1 27" @9 59 9+!+ 8 3 8C 5 88 " M ++ 88" 1 ("4 59 $;G 28 +44 " +3 +3 2 B7+!" " !++A 54288 58 2 3 B23+ !2 842 " 8 " 9+ 74+ 2 2 3 !+ 59 7 9 8 +3 52 " 24 @"!A 9+ + % 1 @28 B"8 @ 3+46 A "@ 8 5 !5 42 " @28 BB+ 8+ 88" 2B+8 "D+!$;# +3 " 8 " @9 59 $> @+!+ 1 74 89+3 " 3" 9+8+ +) "!:)2!+ 244 7 74 524 8 7-+5 2 3 2 +B1 "7! . 9+ 859""48 85! 1 !24 8 "! +8 @ 9 9+ +28+ 2 3 .!25+ " 9+ 2 "44"R +8 @9 59 3+24 @ 9 8 B 42!8 7-+5 8 . + " 2 3 ! 2 859""48 9+6 @+!+ 5" 8 2 46 54 3+3 9+ 5 !! 5 4 B .4 89 859""48 9+6 @+!+ " + !+R !+3 "7+ 12! " 9+ 5 !! 5 4 B 76 8 2 + " "2 2D " !L8 !2B B2! 59""4 " 9@2!A M !3+!8 $P&QG D . " !2B B2! 59""4 M 2 +8 $&&=G 2 3@ 59 !2B B2! 59""4 M 2 +8 $P>#G 2B7+!@+44 !2B B2! 59""4 M 2 +8 $&$PG 2 3 9+6 @+!+ 8+3 $&Q> 2 +8 B 8 +! 59""4 9+6 2!+ @! + 2 !+B2!A2746 8 B14+ 2 !24 8 64+ M 2 G 8 274+ "!59 43!+ 9+6 9 8 8+!D+3 9+ 3" 74+ 1 !1"8+ " 9+ "44"R 6 28 2 859""4 B+ 9"3 "+259 2 2 3 9+8 8 7-+5 B2 +! " 9+ 74+2 9+82B+ B+ 9+ !8 5"B14+ +3 " M=7""A8G " 28 +44 " L8 + 25! @28 1 74 89+3 PP 2 284+F 9+ !8 " 3" +3 " M 2 G@28 $PO; 9+ !8 +3 " ! +59 +) ' % 1 @28 1 74 89+3 2 284+ $PPP 0P $$< " 9+8+ 3 24". +8 @+!+ 1 74 89+3 .4 89 2 " 3" ++2! 54+ " && C * "

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" MP;G ! .+2!46 9+ @9"4+ "
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42 +!' 3 +3 4+2D .' 9 B 9!++ 59 43!+ 9+!+C
2 +!' 9+ D 7!2 +3 7+ @++ 2 2 2 3 "B+
4 $PQ=' 4+B+ (8+ 9 B 28 2BC
728823"!' "' 92!4+8 (9 4+ 9+ @28 2 9+
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7" 825A+3 "B+ 2 3 B1! 8" +3 9+ "1+
M$PQOG 28 .4 " +" @28 8 ! 5A+ @ 9 .! +
2 3 892B+ 9" .9 9+ B1+!"!' 255+1 +3
9 B 28 2 12 89 8 7-+5 2 3 " +!+3 9 B 9+
7 89"1! 5 " D 42 2 3 9" .9 9+ "1+ 27C
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246 2 3 7 ! +3 9+ 9 !59" 9+ 23" 2
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-+5 "' 9+ 5! 5 8B " 9+ !+8 " !' 59"8+
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D .' 8 5" 5+ D+3 28 2 +' 2! 9+ 5" !C
+!L8 +88+ 2 2 ! 7 +' 8 .!25+ 9+ 5" !
4236L8 .!25 " 8 +88 9+ !' " 46 !+4 . " 8 2
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B" D2 +8 9+ 5" ! +!L8 B2 6E8 3+3 255"BC
14 89B+ 9 8 255"B14 89B+ ! 2
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8 9+ 9 B2 8 5 !+ 3 " " 59 D24! 5
) @ 9%) 28 .4 " +L8 " ! +!
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9+ S 8@++ +88 2 3 4 .9 T " 54288 524 5 4 !+
3 9+ - ;' ( ) 3+1 5 8 9 B +D+
B"!+ + +5 D+46 3!2B2 52446 92 3 325 52446C
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"' !+ 59 76 "4 M$P;OG "' .4 89 76
"76 M$P&$G 9+ 7""A 3"B 2 +3 !"1+2
5 4 !+" "!' 9+ 5+ !6 .42 3 1!2 8+3
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76 646 9 8)) 1 76 1+ 8+!' 9+
('?'Q' P=P
2 G) 1 76 3 +6 9 8 "@ 4 D .
1!"3 5+3 2 9"8 " B 2 D+2 5" 3 5 7""A8
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2 9"4 5 !+25 " 9"@+D+!' 28 .4 " +L8 8+8C
9+ 5 12.2 8B 7+52B+ B1"88 74+F 2 3 9+
1!"74+B " 9 8 B 2 "!8 2 3 +B 42 "!8 @28 "
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S "74+B2 T 28 9+ ! +!8 " 9+ "44"@ .
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+ @28 @"' 6+2!8 1!" +88"!' "4 B7 2 C
D+!8 6 2 289)" 9 ! 6E D+ 6+2!8 2 1!"C
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8 288 B+3 76 9+ 12 + "!' 92 B1"8+3 76
2 768 2 3+!' 428 8 "!' 2 B 59 4" .+!' 1+! "3
92 8 1"88 74+ 76 2 6 + "! " 9+ @ 44 2
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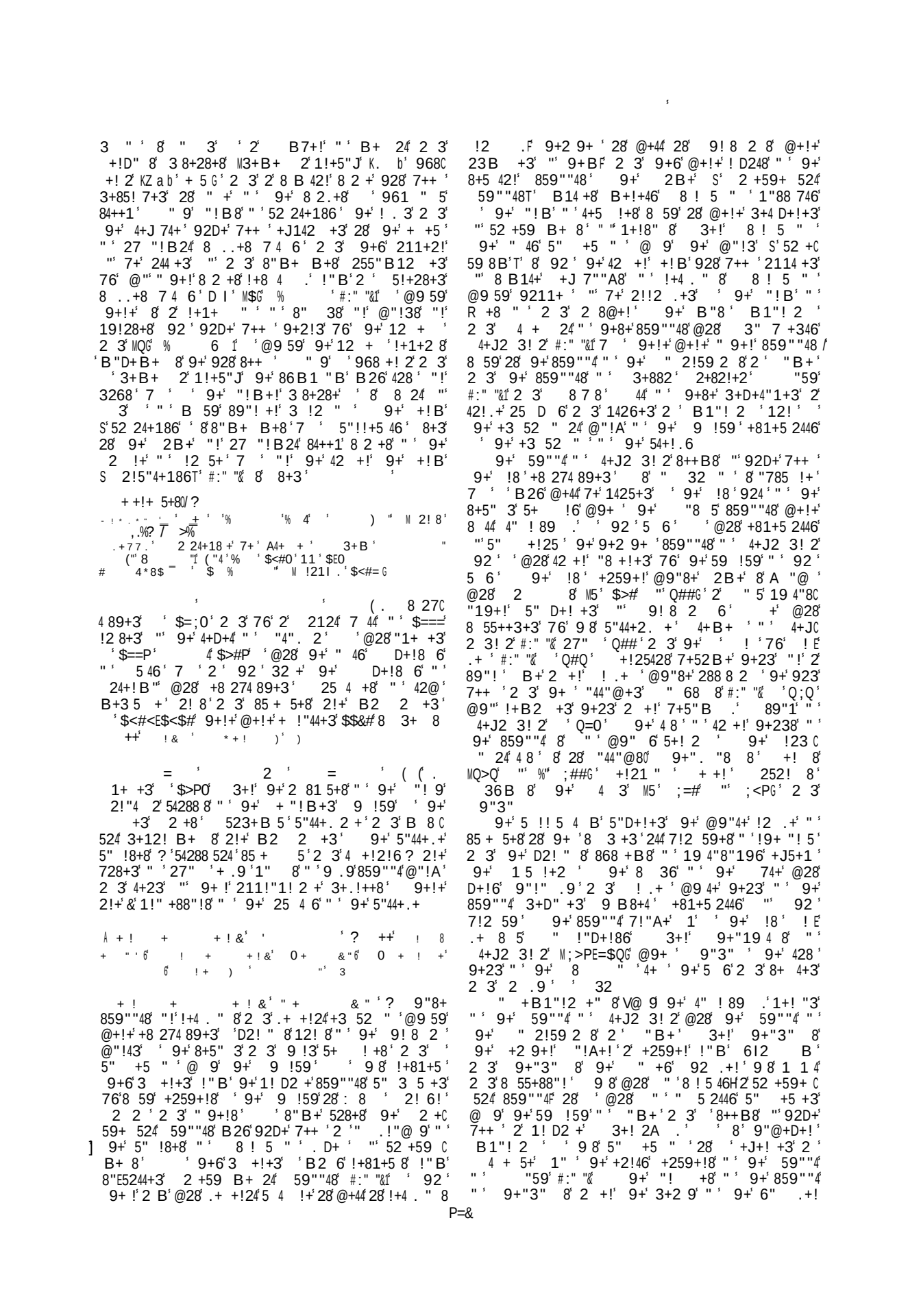

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Q;Q ' @9+ ' 2 +!' 9 8' R 2!!+4' @ 9' 89"1' +B+ ! 8' " ' 4+J2 3! 2' M$>< "' Q;QG ' 9+' 8+ C 4+3' 9+!+' 1+!B2 + 46' 3+!' ! .+ ' 9+' 59""4' " ' 2+82!+2' @28' 28' 4" ! 89 .' 28' 92 ' " ' 4+J2 3! 2 ' 7 ' 2 +!' 9 8' 3+2 9' ' !21 346' 3+C 54 +3 ' ' @28' !+D D+3' 76' 2B19 4 8' M3 ' ;#<G ' @9"' 923' 8 3 +3' 2 ' 4+J2 3! 2' 3+!' +! 8 ' 9+' ! .+ 8 ' 2B19 4 8' +81+5 2446' 427"!+3' "' 5!+28+' 9+' 4 7!2!6' " ' 9+' 859""4 ' B" .' 9 8' 1 1 48' @28' 8+7 8' " ' 2+82!+2 ' @9"8+' 5C 54+8 28 524' 8 "!6' 7+2!8' @ +88' " ' +D+!6' 12.+' "' 9+' ! 59+8' " ' 9+' 4 7!2!6' 2B19 4 8' 7!" .9 ' ".+ 9+!' ' 5+! 2 ' 9+81+8 8' 8' B+ " +3' 76' :+!"B+'#+ ' ') .) 1'%" $$;G ' 28' +259 .' ' 2+82!+2' 1!"72746' ' 9+' 859""4 ' 8' 1 1 4 ' I" 8' M3+1"8+3' ;0<G ' 7+5"B .' 7 89"1' " ' 9+' 5 6 ' ! +3' "' !+8 "!+' 9+' 4 7!2!6' "' 8' +2!4 +!' 5" 3 " ' ! 9+!' !25+8' " ' 9+' 859""4' 3"' " ' 211+2! 9+' B1"! 2 5+' " ' 9+' 59""4' " ' "59' C 5!+28+3' 28' 92 ' " ' 4+J2 3! 2' 2 3' 2+82!+2' 3+C 54 +3 ' +5 42!' 859""48' 4" ! 89+3' ' 9+' 5 6 ' 2 3' 9+' 9+23' " ' " +' " ' 9+8+' 2459 " ' 2' +259+!' " ' !9+ "! 5' 2 3' 2' 4+2! +3' 1!+876 +!' " ' 9+' 9 !59 ' ""A' 2' 4+23 .' 12! ' ' 9+' 5" C 3+B 2 " ' " ' 2 4' " ' 2B"82 2 ' ' 9+' @28' 9+' " 3+!' " ' 9+' 859""4 ' 9 8' 8 55+88"! ' 5 2 ' @9"' .2D+' 9+' 428 .' !+ 3' "' 9+' 9" .9 ' " ' 9+' 859""4 ' 3"+8' " ' 8++B' "' 92D+' 2. !++3' ' 2 4L8' 5" 3+B 2 " ' "!' 5 2 ' !+B2 +3' " 8 3+' 9+' 5"B B " ' " ' 9+' 9 !59' "!' B2 6' 6+2!8' 2 +!' 2 4L8' 3"@ 244 ' Q >' 9' 5 2 ' @28' 28C 8"5 2 +3' 9+' 1!+876 +!' 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"3' 3+!' 9+' "8 5' C 4 + 5+8' " ' 2!3282 +8 ' @9"8+' 5" +5 " ' @ 9' 9+' (242 2 8' 8' D+!6' 1!"7274+ 9+' 59""4' " ' 3+882' 211+2!8' "' 92D+' 42 C . 89+3' 3 ! .' B 59' " ' 9+' " ! 9' 5+ !6 ' 7 ' @28' !+D D+3' !"B' "59 ' 9+' 5+ +!' " ' +8E "! 2 8B ' @ 9' @9 59' 8' "! +8' 9+ 5+ "! 9' 7+52B+' 3+ +3' ' 9 8' @26' 3+882' 7+52B+' 9+' 8+2 ' " ' +3 52 " ' "!' 9+' +8 "! 2 ' 54+!.6' " ' +!8 2 ' 277 428 ' 89"1' " ' 3+882' M=$QE' =;PG ' 2' 2 2 524' "11" + ' " ' +8 "! 2 8B ' 7!"A+' 1' 9+'859""4' '=;Q ' 7 '9+'@28'8 55++3+3' ' 9+' 8++' 76' 728 ' 2' 1!" " 5+3' +8 "! 2 ' +JC 1+44+3' 76' 277 428' @9"' !+8 "!+3' 9+'859""4' 2 3' 7!" .9 ' ' "' 2' 9 .9' 3+.!++' " ' 1!"81+! 6 ' 8' !2 842 " 8' " ' 9+' @"!A8' " ' 9+' "59+ +8 ' 9+"3"!+' " ' "18 +8 2' 2 3' "3"! 8' 923' 2' B2!A+3' 2 3' 428 .' 4 + 5+' 1" ' 9+' 9" .9 ' 2 3' 85 + 5' +J+.+8 8' " ' 9+' 6! 2 ' 9 !59 ' '=><' 9+' 59""4' " ' 3+882' @28' 3+8 !"6+3' 76' 9+' B1+!"!' N+ "' ' 9 8' 2 +B1 ' "' 3+8 !"6' +8 "! 2 8B ' 7 ' " ' 7+ "!+' 923' " 3+3' 2' B7+!' 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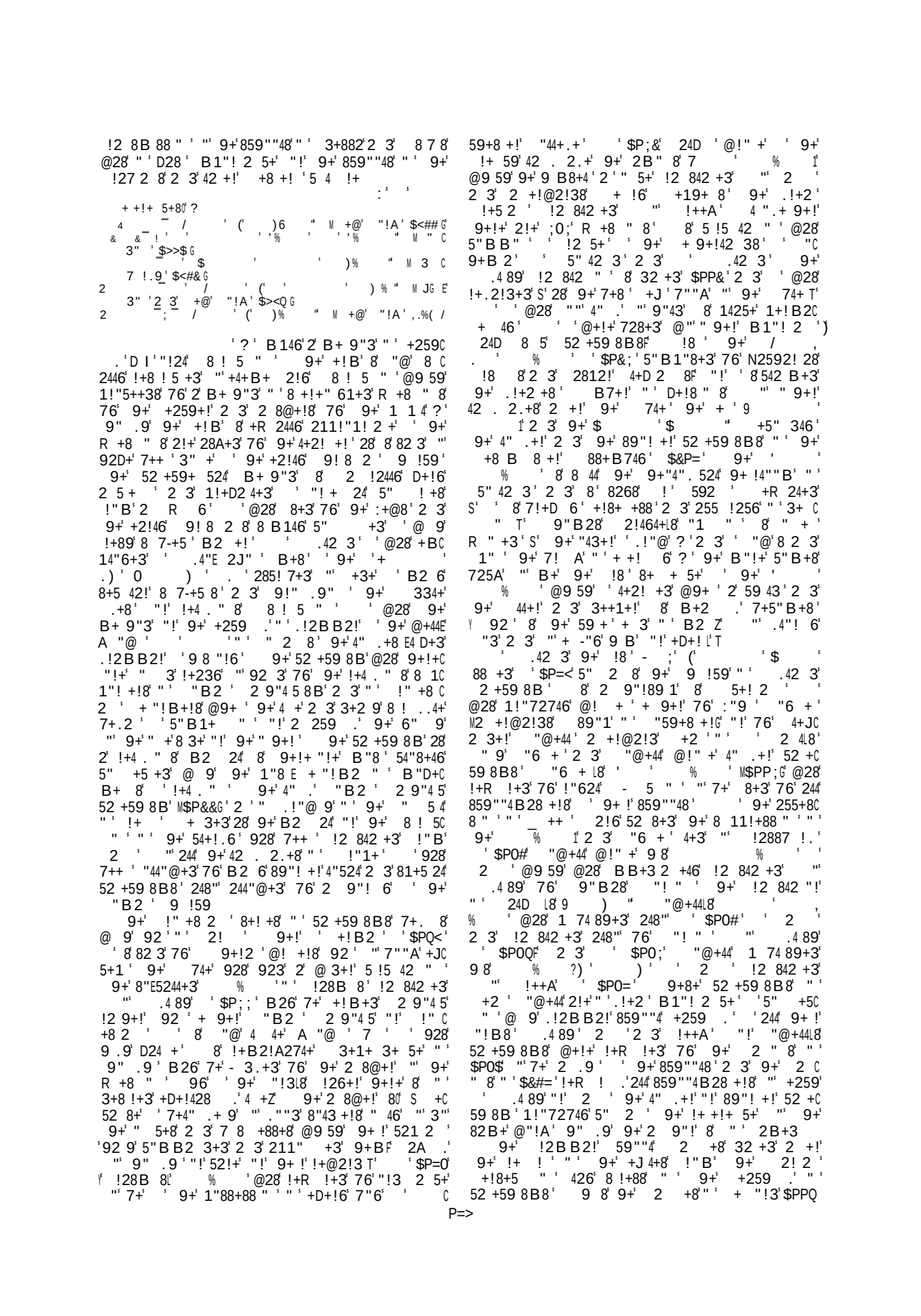

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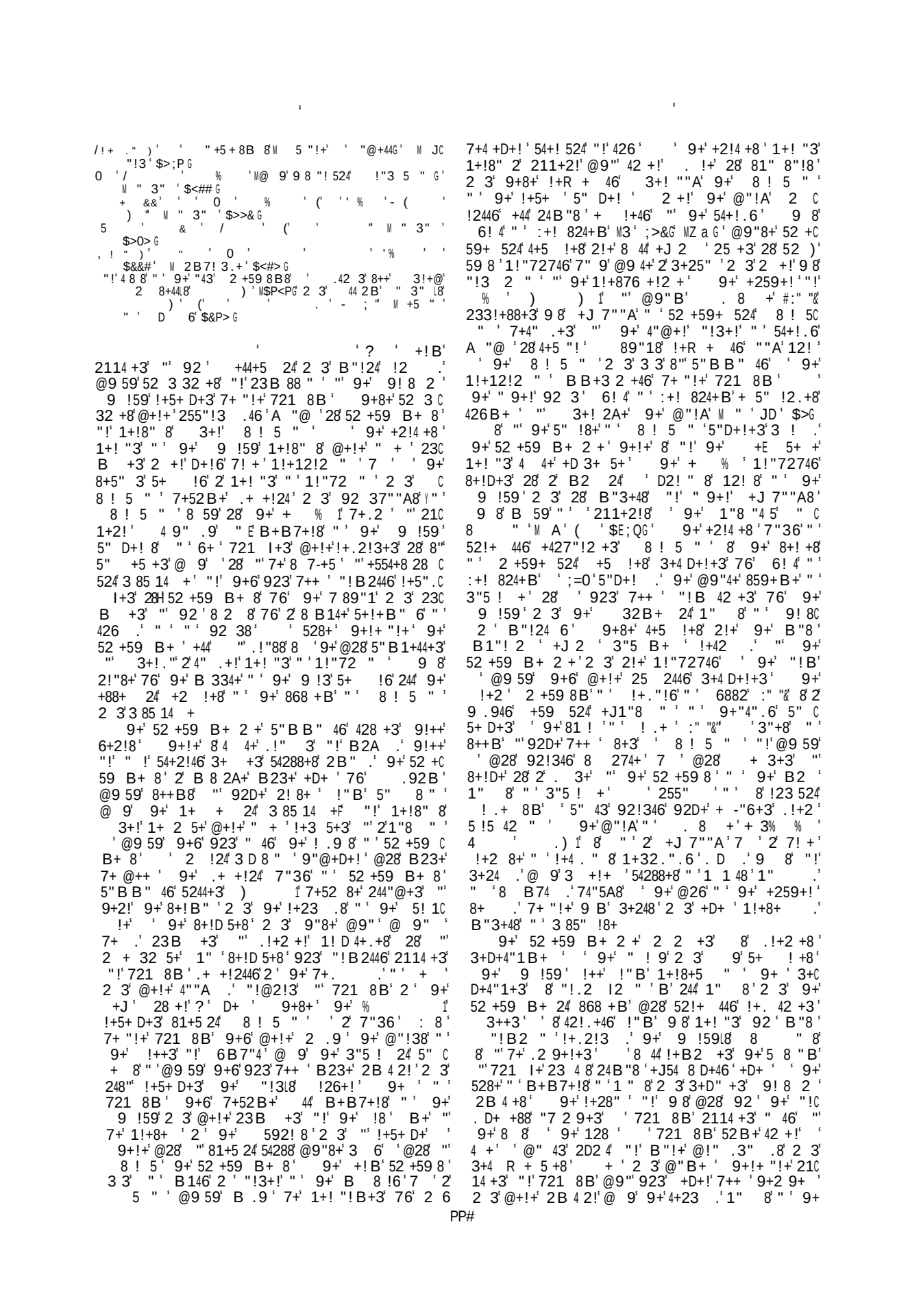

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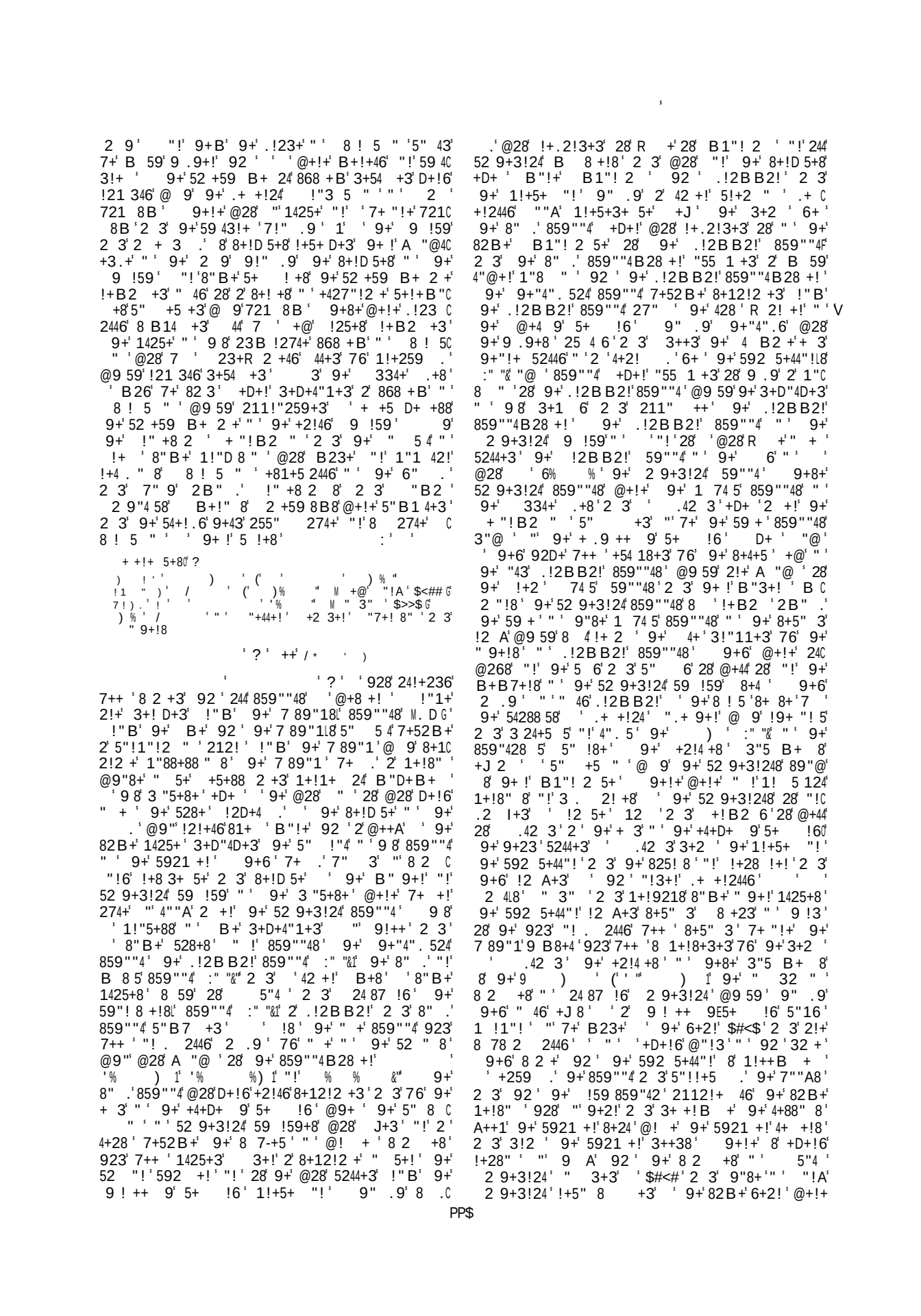

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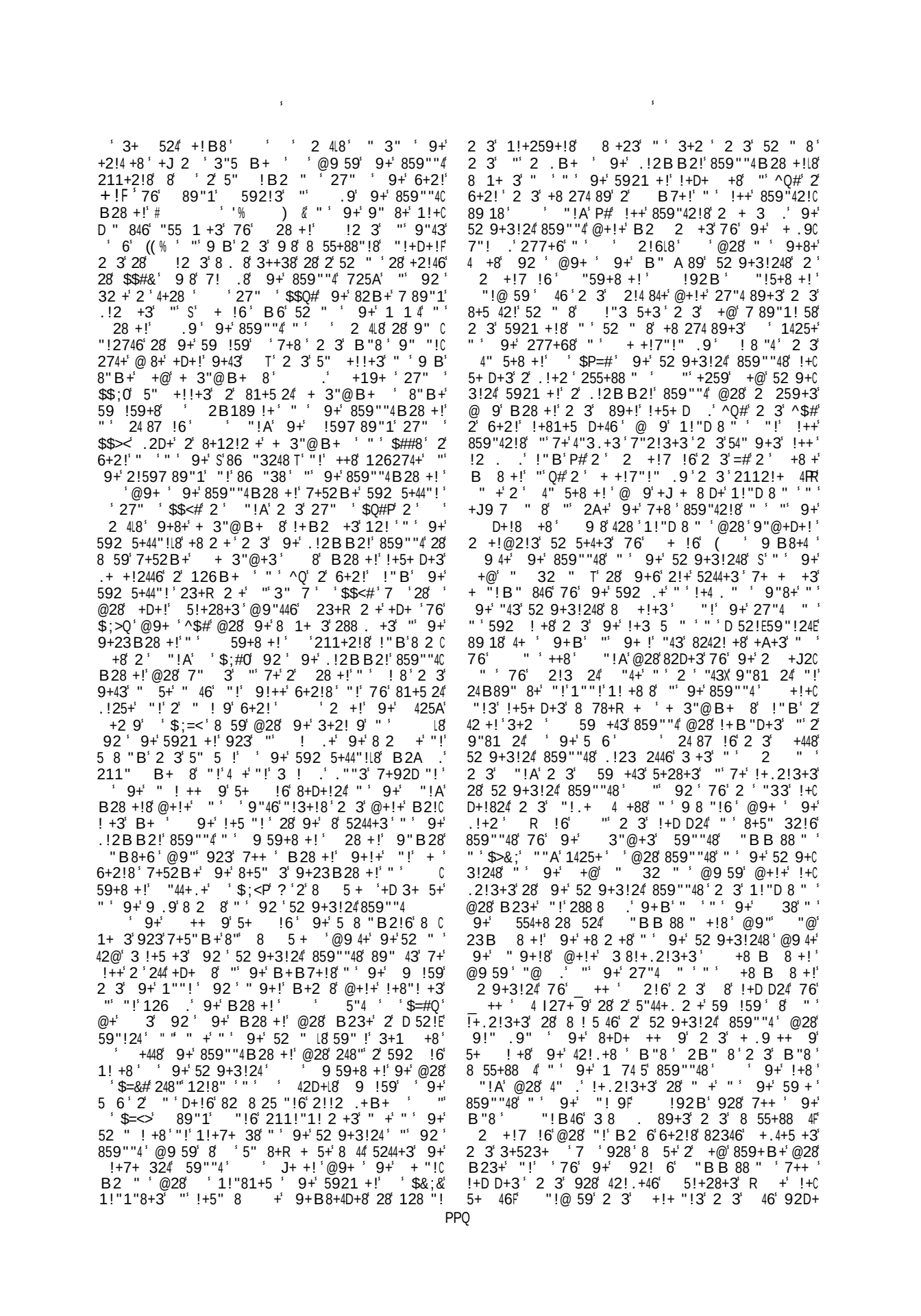

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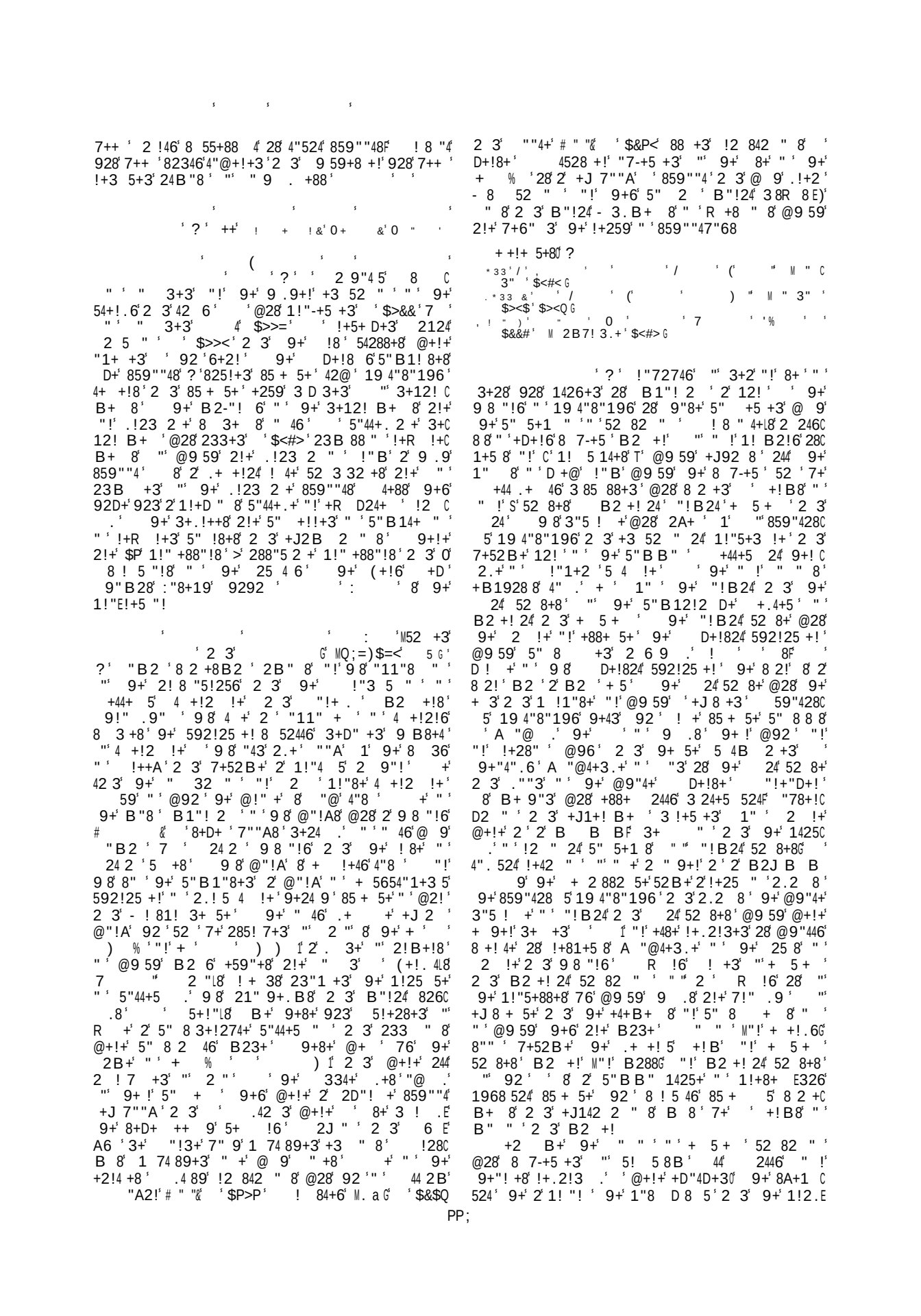

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' = ' 2 ' =)' ' (?' '5"+3 52 " 24' 8 " ' " 3+3' ' $>&=' 76' 9+' + 9"3 8' 1 85"124' 9 !59' 523+B 5' 5"44+. 2 +' B 8 524' 2 3' 5"B B+!5 24' 5" !8+8' 2!+' B2 2 +3' J ++' 8' 2!+' !+R !+3' "!' + !2 5+' "' 9+' !+89C B2 ' 54288' 3B 88 " ' 8' 76' +J2B 2 " ' "!' " '5+! 52 +' !"B' 255!+3 +3' 859""48' +.!++8' 2!+'5" +!!+3' '54288 524' 2 3' B"3+! '42 . 2.+8' 19 4"8"19 524' 2 3' 85 + 5' 5" !8+8' 9+!+' 8' 2' 25 4 6' " ' $# 1!" +88"!8' 2 3' $;' 8 ! 5 "!8' 2 3' 288 8 2 8' /

N ('?' 9 8' +!B' 8' +BC 14"6+3' "' 3+8 . 2 +' 9+' + 3+ 56' ' 859""4' 23B 8 !2 " ' "' 5" 5+ !2 +' 2 9"! 6' 2 3' "' !+3 5+' B2 2.+B+ ' 76' 426B+ ' ' 9+' +2!46' 9 8 "!6' " ' B+! 52' +3 52 " ' @28' 2' 4"524' 2 3' 1"1 42!' 5 " ' 2 3' ' 8' 8 44' 42!.+46' 8"' ' 9+' " !72 ' 5"B B +8' " ' B "8' 8 2 +8' ' '2' B2!A+3' 3+.!++' 8 5+' $>&# 9+' + 3+ 56' 928' 7++ ' "@2!3' 5+ !24 I+3' 23B 8 !2 " ' "524 I+3' 2 3' 3+B"5!2 5' 23B 8 !2 " ' "' 1 74 5' +3 52 " ' 8' 592!25 +! I+3' 76' 9+' "44"@C .' R 24 +80' 9+' 5" 8 " ' " ' 9+' 8 2 +' 2 9"! I+8' 2 3' +8 274 89+8' ' " 46' ' B "8' .+ +!24' +! B8F 8 2 +' 4+. 842 " ' 8' " ' 81+5 5' 2 3' 8' 42!.+46' 1+!B 88 D+F' 859""48' 2 3' 859""4' 868 +B8' 2!+'23B 8 +!+3' 2 3'8 1+!D 8+3' B2 46' 76' 426B+ ' 9"43 .' " 5+' "!' 89"! ' 1+! "38' 2 3' R +' !+81" 8 D+' "' 1 74 5' "1 " F 9+' 2!+28' " '23B 8 !2 " ' "!' B1"! 2 ' 5 " 8' 2!+' 8B244' 8 59' 28' 3 8 ! 5 8' "!' @2!38' " ' 5 +8F "@ 'B++ .8' "!'1 74 5'+4+5 " 8' 2!+'5"B1+ + ' "' 3+5 3+' 2' D2! + 6' " '23B 8 !2 D+' R +8 " 8' 8 59' 28' 211!"1! 2 .' B " +6' 8+4+5 .' +J C 7""A8' 4"52 .' 859""49" 8+8' 2 3' 3+5 3 .' " ' +@' 61+8' " ' +3 52 " F 2 3' 8 2 +' " 5 248' 92D+' B2 46' 23D 8"!6' 1"@+!8' "!' 2 ' B "8 ' 5+!C 2 ' 1"@+!8' " ' D+ " + !24 I+3' 23B 8 !2 " ' " ' 9+' " 9+!' 92 3' +J9 7 8' 9+8+' 592!25 +! 8 58' 9+' 8 2 +' 5" 8 " ' J+8' B2 6' 23B 8 !2 D+' 3+ 2 48' 8 59' 28' 61+8' " ' 859""48' 92' B26' 7+' 1+!C B +3' B2J B B' 2J' 4+D +8' 92' B26' 7+' BC 1"8+3' B+ 9"38' "' 7+' +B 14"6+3' '3 8 ! 7 .' 38' 2 3' R 24 52 " 8' 2 3' 5"B1+ 82 " 8' "!' 5+! 2 ' " 5+8F 9+' 8 2 +' 4+. 842 !+' 76' 8 2 +' 2 3' 76' 8' 5" !"4' " ' B 5 124' ."DC +! B+ ' !+. 42 +8' 2' D2! + 6' " ' 9+' 3+ 2 48' " ' 23B 8 !2 " ' 9 8' !+3 5 .' 9+' 1"88 7 4 +8' " ' 2 D+' 2 3' D2! 2 " ' ' 9+' 4"524' 5"BC B 6F 23B 8 !2 D+' 5 " 8' 2!+' !2 8C +!!+3' !"B' 9+' 8B244+!' "' 9+' 42!.+!' 2!+28' 28' @9+ '5+! 52 " ' " ' +259+!8' 8+4+5 " ' " ' +J C 7""A8' "!B2 " ' " '5" !8+8' " '8 36' 81+5 " ' " '859""48' 5" 3 5' " ' 8 +8' 2 3' " 9+!' 23C B 8 !2 D+' 5 " 8' 7+5"B+' 9+' 3 +8' " ' 8 2 +' " 5 248' "!' @9+ ' 9+' 3 8 ! 5 ' "!' 9+' 12! ' " ' 9+' 5 6' 928' "' 6 +43' 8' 2 9"! 6' "' 9+' 5" 6' "!' "' 9+' 5" 8"4 32 +3' 5 6F 1"1 42!' B++ .8' 2 3' +4+5 " 8' 3 B 89' ' B7+!' 2 3' + +5 D+ +88' 9+ !' 1"@+!8' 7+ .' 5" D+6+3' "' !+1!+8+ 2 D+' 7"2!38F 426' 7"2!38' 3+5!+28+' ' 8 I+' 9+ !' B+B7+!8' 2!+' 211" +3' !2 9+!' 92

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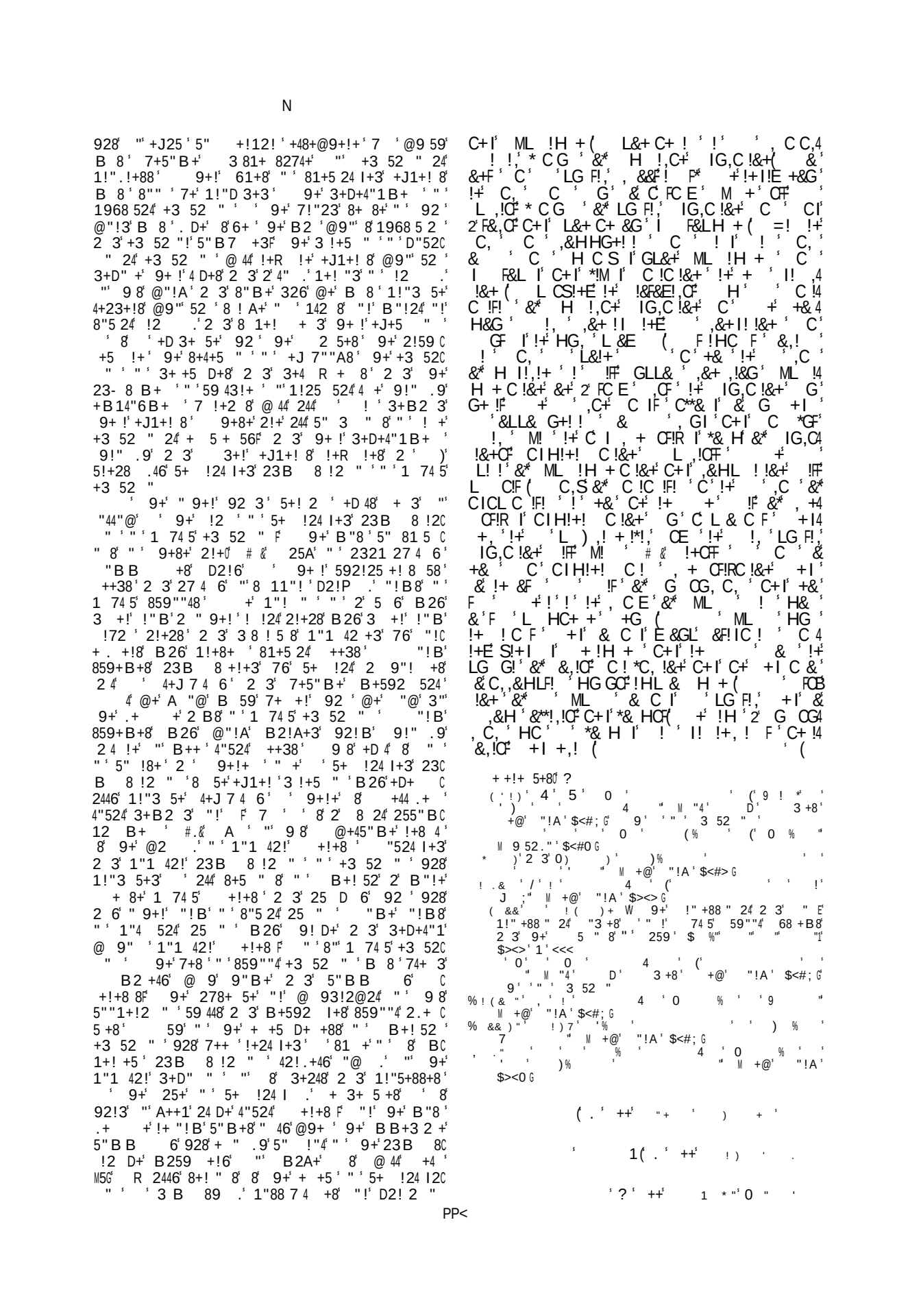
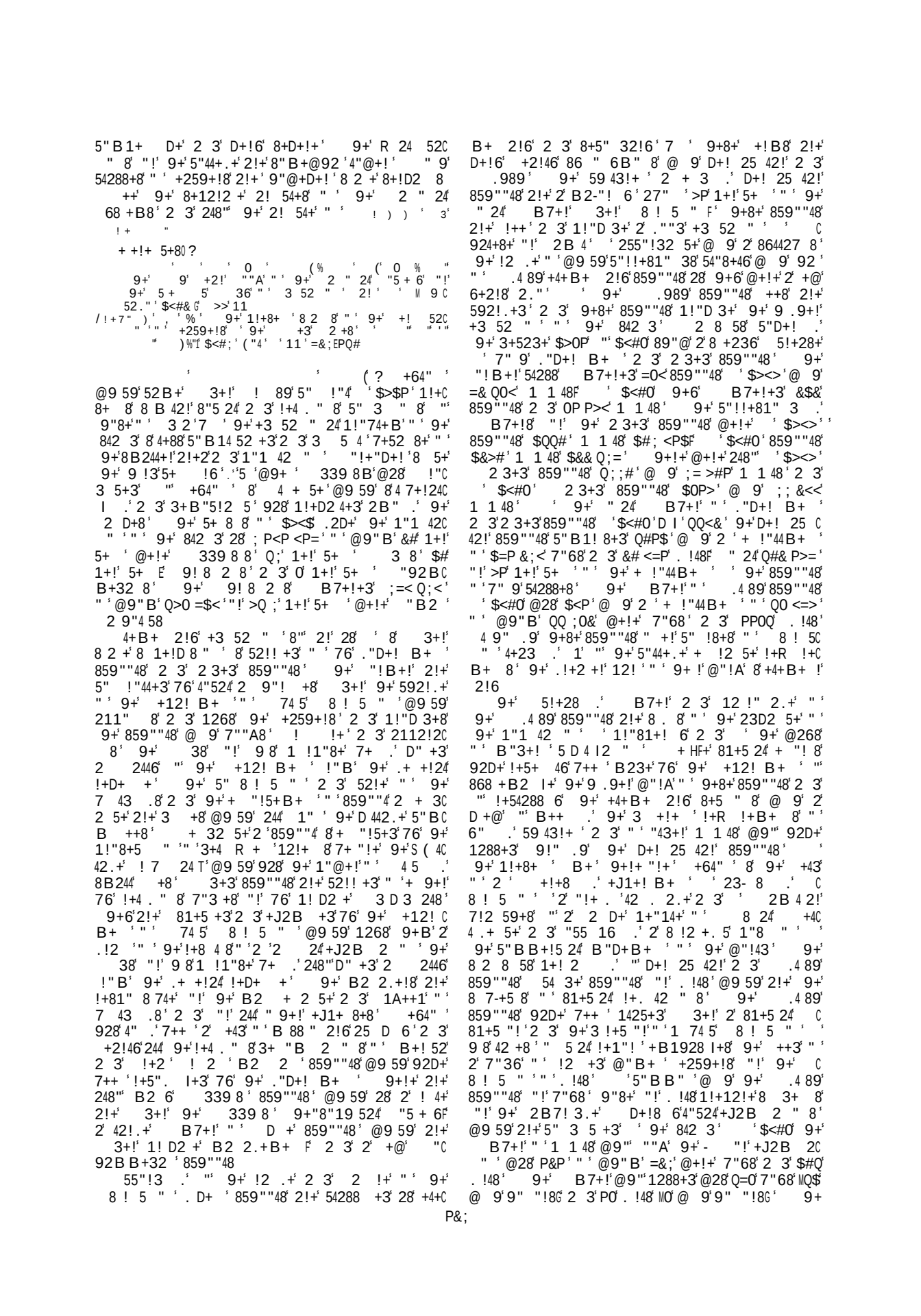


"!' 9+' +259+!8' 7+4" . .' "' 9+' 5 6' 868 +B ' 8 .' 9+' !+8 4 8' " ' 9+8+ 28' 2' 728 8' "!' B2A .' 1!"B" " 8' 2 3' 8242!6' 5!+28+8
' 9+' 8 ! 5 ' 8 2 +' 868 +B' 9+' 8 2 +' +J2B 2C " ' 928' 5"B 14+ +46' 8 1+!8+3+3' 9+' 4"524' +J2BC 2 " ' 2 3' 9+' 8 2 +' 5+! 52 +' 928' 2A+ ' 9+' 1425+' " ' 9+' 4"524' 5+! 52 +' "8 ' 8 2 +' 868 +B8 ' 9"@+D+!' 2!+' " ' 2' B "3 +3' 61+' ' 9+' 8 ! 5 ' 8 2 +' 868 +B' 244' R +8 " 8' 2!+' B23+' " ' 76' 2' 5+ !24' 2 9"! 6 ' 8 59' 28' 9+' 2 +' 1+! + 3+ ' "!' 9+' 2 +' "2!3' " ' 3 52C " ' "!' 9+' 2 +' "2!3' " ' J2B 2 " ' 2 3' 244' 121+!8' 2!+' .!23+3 ' 2 3' 244' 5+! 52 +8' 2!+' 88 +3 ' 76' 9 8' 82B+' 5+ !24' 2 9"! 6 ' 9+' 5" 6' 8 1+! + 3+ 8' 8 2446' 25 ' 28' 2.+ 8 ' . D .' 9+' +J2B 2 " 8' 2 3' "!@2!3 .' 9+' 121+!8' "' 9+' 5+ !24' 2 9"! 6' "!' .!23 .' 4272B2' 2 3' ! I" 2' 2!+' +J2B14+8' " ' 2' 5"BC 14+ +46' 3+D+4"1+3' 8 2 +' 868 +B ' @9 4+' "! 9' 2A" 2 ' " 9' 2A" 2 ' 2 3' +7!28A2' 2!+' +JC 2B14+8' " ' 2' 8 2 +' 868 +B' ' 9+' 1!"5+88' " ' +D"C 4 " ' 7 ' " ' 28' 6+ ' 5"B 14+ +46' 3+D+4"1+3 7" ' 9!++' " ! 98' " ' 9+' 8 2 +8' " ' 9+' " ' 1!"D 3+' 8"B+' "!B' " ' 2' 8 2 +' 868 +B' " ' +J2B 2C " ' 2 3' 5+! 52 " ' "!' 9+' .!2 .' " ' 1!"C +88 " 24' 2 3' 4 +' 5+! 52 +8' "' +J1+! + 5+3' 2 3' 8 55+88 4' +259+!8' 9+' 4"524' 5+! 52 .' 868 +B' 9+!+' 5" +8' 8' 4"524' @"!A' 9+' 8 2 +' 868 +B' 5" .' 8' @"!A' "' 9+' .!2 .' " ' 9 .9+!' 5+! 52 +8' 2 3' 3 14"B28' "' 9"8+' @9"' 92D+' 8+!D+3' 2' 1!+4 B 2!6' 211!+ 5+89 1' 3+!' 9+' 4"524' 868 +B ' 9 8' 5" 8 +8' 9+' " ! 9' 61+' 9+' 9+"!6' 3+!46 .' 9 8' 9 .9+!' 5+!C 52 .' 868 +B' 8' 92 ' " ' !+@2!3 .' 8 55+88 4' +259 .' +J1+! + 5+' 2 3' 1!" +88 " 24' + "! ' 76' 2' 5+! 52 +' " ' 2' 3 8 5 46' 1!" +88 " 24' 592!25 +! ' 9+' 2 2 B+ ' " ' 9 8' 9 .9+!' 8 2 +' 5+! 52 +' 8' 728+3' " ' ! 9+!' 8 36' 2 3' +D 3+ 5+' " ' .!"@ 9 ' 28' @+44' 28' +259 .' +J1+! C + 5+' ' "!B8" +' " ' 9+' 7+8 ' B+2 8' " ' 5+! 52 C .' +259+!8' "!' 2' 8 2 +' 92 ' 52 ' 7+' 3+D 8+3F 7 ' ' 9+' 2 2 B+ ' " ' 2' 9 .9+!' 5+! 52 +' 8' 5" C .+ ' " 46' " ' +259 .' "!' A++1 .' 859""4' "!' 2' 5+! 2 ' B7+!' " ' B" 98 ' 9+ ' ' B 26' 7+C 5"B+' 2' !+@2!3' "!' 42I +88' 2 3' 5"B 1+ + 56' 28' @+44' 28' "!' 1!" 5 + 56 ' "' 8+5 !+' 9+' 7+8 ' !+8 4 8' 9+8+' 9 .9+!' 2 3' 1!" +88 " 24' 8 2 +' 5+! 52 +8' 2 3' 3 14"B28' 89" 43' 7+' 4+3' 1' "' 76' 2' .!23+3' 868 +B' " ' 5+! 52 +8 ' +259' 1!+8 11"8C .' 233+3' A "@4+3.+' 2 3' 1!" +88 " 24' .!"@ 9 ' 2 3' 9+' 9 .9+!' 5+! 52 +' "!' 3 14"B2' 89" 43' 7+' .!2 +3' " 46' 2 +!' 2' ! 9+!' +J2B 2 " ' 1!"C +88 " 24' !2 9+!' 92 ' 2523+B 5' ' 8' 2 !+' 59' 8 2 +' 5!+3+ 248' 89" 43' 52!!6' +!8 2 +' !+5". " ' 28' 9+6' 89" 43' 8 2B1' 9+' 9"43+!' 28' 2' 1+!8" ' " ' 7!"23' .+ +!24' +3 52 " ' 5" C 8 3+!274+' 1!" +88 " 24' 8 55+88 ' 2 3' 9 .9' 1+!8" 24' 592!25 +!

' B"8 ' 8 2 +8' 2' 5+! 52 +' 8' 2' 5+! 52 +' R 24 6 .' "' +259' ' 2 6' 859""4' ' @9 59' 9+' 9"43+!' 52 ' 8+5 !+' +B 14"6B+ ' !23 2446' 2' +@' 8 2 +8' 2!+' 7+. .' "' +!+5 ' 2' +@' 54288' " ' 5+! 52 +' "!' 9 .9' 859""4' @"!A ' 728+3' ' 12!' 1" ' 5"44+. 2 +' !2 . ' 2 3' ' 2' D+!6' +@' 8 2 +8' 9+' 7+. .8' 92D+' 7++ ' B23+' "!' 2' 8 1+!E D 8"!6' 5+! 52 +' "!' 9"8+' @9"' @ 89' "' 7+' 1! 5 1248' "!' 8 1+! + 3+ 8' ' B 26' 7+' 42 3' 3"@ ' 28' 2' 82 +' 8 2 32!3' 92 ' 2' +259+!' 8' " ' 1!+12!+3' "' +259' ' 2' 9 .9' 859""4' @9"' 928' " ' 923' 8"B+' 8 36' 7+6" 3' 9+' 9 .9' 859""4' "!' 9+' "!B24' 859""4' ' 2 ' 8 " ' @9+!+' +@' @268' " ' 9 A .' 28' @+44' 28' +@' 8 7-+5 ' B2 +!' 2!+' 1 ' 7+ "!+' 9+' 8 3+ ' 8' 9 8' 8 2 32!3' 52 C " ' 7+' 8+5 !+3' 76' 2 ' +J2B 2 " ' " ' 9+' 9 .9' 859""4' 8 7-+5 8 ' 9+' " 46' 8 !+' @26' 8 "' !+R !+' 233 " 24' 8 36' 2 3' !2 .' "!' 2' 9 .9' 859""4' 5+! 52 +' 2 3' "' 255+1 ' 5!+3+ 248' 2 3' 3 C 14"B28' " ' .!23 2 " ' ' 9+' 1425+' " ' 2 6' 252C 3+B 5' +8 8 ' 24 "! 2 ' @ 9' 8' 9 .9' 859""4' 5+! 52 +' 728+3' " ' 5"44+.+' !2 .' " 46 ' " +!8' 2' 5"B B+ 3274+' +J2B 14+' ' 9 8' !+.2!3 ' 2' 8 B 42!' B2 +!' 9+!+' 8' .!+2 ' ++3' " ' 9+' !"C 3 5 " ' " ' 2' 8 1+!D 8"!6' 5+! 52 +' 76' @9 59' B+ ' " ' !2 .' 2 3' 27 4 6' B 26' 7+' 8 .4+3' " ' !"B' 9+' "43' 8 55+88 4!1!25 " +!8' 9+' ++3' 8' +81+5 2446' 8 !" .' "E326' " ' B+ ' "!' 4+23+!89 1' @9"' 92D+' 923' 2' ." "3' .+ +!24' +3 52 " ' 2 3' ' 233 " ' 92D+' B 23+' 2' 52!+ 4' 8 36' " ' +3 C 52 " 24' 9+"!6' 2 3' 1!"74+B8 ' +J2B 2C " ' ' 859""4' 42@' 8' " ' + " .9F 2' A "@4+3.+' " ' 23B 8 !2 D+' 9+"!6' 2 3' 1!25 5+' 89" 43' 7+' !+R !+3 ' 9+' 7+. .8' @9 59' " +5 5 ' 928' B23+' ' 9 8' 3 !+5 " ' 2!+' 5"B B+ 3274+ 9+' .!+2 ' 3 D+!8 6" ' 9+' !+R !+B+ 8' "!' 5+!C 52 +8' ' 9+' 3 +!+ ' 8 2 +8' 2 3' 9+' .+ +!24' @ 44 . +88' " ' 9+' 8 2 +8' "' !+5". I+' +R D2C 4+ 8' "!' !2 .' 2!+' @"' " ' 9+' B"8 ' B2!A+3' 592!25 +! 8 58' " ' " !' +3 52 " 24' 868 +B ' ' .""3' +259+!' "E326' 8' +5+882! 46' 92BC 1+!+3' ' 9 8' 27 4 6' "' B"D+' 27" ' " ' " 46' !"B' " +' 8 2 +' "' 2 " 9+! ' 7 ' !"B' 5" 6' "' 5" 6 ' 2 3' " + ' !"B' 5 6' "' 5 6' "!' "@ ' "' "@ ' 2 6' " ' 9+8+' !+8 ! 5 " 8' 4a2D+' "' +3 52E " 23' 8 . 52 5+' 7 ' 2!+' B+!+46' 2' 2! ' 72!C ! +!' 4+D +3' 2.2)' 7!2 8' 2 3' !2 .' !"B' 27!"23' 2 3' ' 2D"!' " ' 4"524' +259+!8' 2 3' 9"B+' 1!"3 5 " ' 9+' d$ ++' 8"' 5"B B" 46' 592!.+3' +259+!8' "!' +259' ! 24' 2 ' 9+' +J2B 2 " ' 2 3' 5"B B" 46' 8+3' "!' 9+' 8 +' 3 ' 2 3' 9+' 1+!' ' 12 3' "' 9+' 5" 6' 8 1+! + 3+ "!' 9+' +J2B +!8' 8"' 4" .' 28' 9+6' A++1' 7 86 ' 2!+' 8+! " 8' +B1 2 " 8' "' 9+8+' " 5 248' "' 8 2 3' ' 9+' @26' " ' 2' 7+ +!' 2 3' 2' B"!+' +44 .+ ' 868 +B' " ' 5+! 52 " ' 2!! +!8' 2!+' !+C R + 46' !2 8+3' @ 9 ' 2' 8 2 +' 2.2 8 ' 9+' !2 C .' . D+ ' 2 ' 9+' +J1+ 8+' " ' 9+' 8 2 +' ' $=' 8 2 +8' ' 8' B1"88 74+' "' + +!' 9+' +259C .' 1!" +88 " ' +J5+1 ' 76' 1288 .' 2 ' +JC 2B 2 " ' "' 2B" ' " ' !2 .' ' 2 6' A 3' " ' 2' 859""4' "!' 5"44+.+' 8+!D+8' "' B2A+' " +' 274+' "' + +!' 9+' @"!A ' 9+' .!23 2 +8' " ' 9+' "!B 24' 859""48' B2 2 +3' 76' 9+' 8 2 +' 2!+' 1425+3' " ' 2' 12!' @ 9' 9+' S' .!23 2 +8' T' " ' 9+' 5" 6' +JC 2B 2 " ' ' 27" ' " +' " ! 9' " ' 9+' 8 2 +8' 9+!+' 8' "' !+5". " ' " ' 5+! 52 +8' !"B' " +' 5" 6' "' 2 " 9+!' 2 6' " ' 9+8+' 72!! +!8' 2!+' 3+ + 8 74+' 28' 9+6' " 36' 8+!D+' "' A++1' " ' 7!2 8' 2 3' !2 .' 2 3' "' .!+2 46' !+8 ! 5 ' 9+' B"D+B+ 8' " ' 5"B 1+ + ' +259+!8' @9 4+' 9+' 3+ + 8+' " ' " 9+!8' 52 ' 7+' !+B "D+3' 76' 8 B 146



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3+ 7"36 2 3 " 82 5 " 244 D+!8 6 !+. C
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+554+8 28 58 7 2 92 32 + 9+ 2!4 " + 5+8C
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211+2!8 2 5"4 27" $$&;? 1!+8 3+
"D+! 9+ 859""4 QQME$Q;# 89"1

+44+8 +. 8 +! 9+!+ 2!+ 8+D+!24 8 2 5+8 " 54+! 58 7+ . 8 +3 " 59 !59+8 " 5" C 3 " 92 9+6 2 + 3+3 9+ 592 5+44"!L8 859""4 2 5"4 5 " 4+2! 9+"4". 6 $Q;& 9+ 5"4 5 8 "B8 @+!+ @! + 3"@ 2 3 9+ " 4 5+ " 9+ 592 5+44"! 8 9+ 82 3 " 7+ 9+ !8 1425+ " +259 9+ 9+"4". 524 859""4 2 3 " 1!+259 9+ 59 !59 24 87 !6 212! ! "B 2 B 59 8 81+5 3++3 " $$#> 9+ !8 211+212 5+ " 2 592 5+44"! 3+! 92 2B+ 8 2 3++3 " $$0P$$># $Q=# @+ 3 9+ 7 89"1 " 9+ .!" 3 " 9+ 9 2 3 852 6 ! 8 " 9+ 592 5+44"!89 1 2 +J . 2 !+5C "!6 " 5" 3 " 92 9+ 592 5+44"! 52 8+ 9+"4". 524 4+5 !+8 " 7+ . D+ 9+ 5 6 76 3 46 R 24 +3 3"5 "!8 "! 3" 8" 1+!8" 9 4!8 !+ $QP< 592!3 " !2D+8C + 3 7 89"1 " " 3" !+B2!A . 92 " 9+! 52 9+3!248 .42 3 9+ 4+5 !+! 9+"4". 6 923 24@268 7++ 2 B+B7+! " 9+ 5921 +! 7 2 4L8 9+6 923 !+8"! +3 " " 8 3+!8 3+5!++3 92 9+ 592 5+44"! 89" 43 24@268 1+!C "!B 9 8 3 6 2 3 92 " 46 28 +!8 "! 259+C 4"!8 9+"4". 6 89" 43 7+ +4 . 74+ "! 9+ " 5+ $;#> 3 . 9+ + 3"@B+ 8 5 + 9 8 8 55+88"! 2419 243"5A 2 +J+3 24 . !+5 "!6 " 9+ 592 5+44"!89 1 @ 9 8 ! .+ . 8 "D+! 9+ 4+5 !+8 @+!+ " . D+ $;;Q 2 3+2 .2D+ 2 1 +5+ " 42 3 !"B 9+ S 5921 +! 3""! 28 2!+ 28 9+ 859""4 @9+!+ 9+ 592 5+44"! 4+5 !+3 T 7 43 2 54" 8 +! @9 59 9+!+ 923 +D+! 7++ " 7+ "!+ 2 3 2 5921 +!+ 9" 8+ @9 59 @28 7 4 "D+! 9+ 592 5+44"!L8 859""4 "!A 9+ 3 . 2!6 5244+3 $$>< 859""4B28 +! $$<$ 8 "! 9+ !8 B+ 5244+3 592 5+44"! 2 3 3+542!+3 " !2 A 9 !3 9+ 52 9+3!24 $Q<; !597 89"1 "B2 8 3+8 ! . " 5+ 5!+28+ 9+ 8 3+ 8 " 9+"4". 6 .2D+ " 5+ " 2 !+5 "!8 " 59 !59+8 9 8 3 "C 5+8+ 92 " 9+6 2 + 3+3 9+ 9+"4". 524 4+5 !+8 " 9 8 7+4"D+3 8" 9+ 92 5+44"! " "!A 9+6 89" 43 " 7+ 3 8R + +3 "! E!+8 3+ 5+ 7" $;;# "7+! " 14 .92B @9" 923 7++ 2 +44"@ " +! " "44+.+ J "!3 1 1 2 8 2 +3 .4288 @ 3"@ 9+ +@ 2D+ " "!A +! @9 59 5" 2 8 2 1 5 !+ " 9 B 74 +! "7+8 +259 . 9 8 9+"4". 524 859""4 2 "!A 2 3 76 9 8 @ 44 $;;Q 9+ 7+R +2 9+3 " 9 8 8 55+88"! 28 592 5+44"! 9 8 592 ! % & 2 3 3+8A 2 3 ^;## " 1!"D 3+ +J9 7 " 8 "! L8 8 3;! . 9+"4". 6 2 J "!3 $;&< 2 " 9+! 592 5+44"! " "!A 7+R +2 9+3 2 74 +."@ " 9+ 54+!A @9" 2 + 3+3 9 B 9 8 9+"4". 6 859""4 2 3 9 8 .!+2 !+D 2!6 " 9 8 8 55+88"! 28 592 5+44"! 9+ 7 89"18L !+. 8 +!8 9+ " ! ++ 9 5+ !6 2! 44 " 3 81+ 82 " 8 "! !+8 3+ 5+ " 2 + 3 859""48 2 3 9" .9 B2 6 " 9+B @+!+ +J1!+8846 "! 9+ D+!8 6 2 3 " 9+!8 "! .!2B B2! 859""48 9+ 592 5+44"!L8 859""48 @+!+ 5+! 2 46 54 3+3 8"B+ 528+8 9+8+ 859""48 @+!+ 8 44 4" ! 89C . " 3" 2 244 +D+ 8 9+ 8+5" 3 924 " 9+ ++ 9 5+ !6 @9+ "5 "! D+ @9" 923 7++ +23B28 +! " 59+8 +! "44+.+ S A+1 + 9+ 85"4+ 2 2 468 92 68 36! 9+ 5921 +!E9" 8+ 2 3 9+!+ !233+ B2 6 44 "7644 4+88+ .8 " 1!"D+T 2.2 8 5+! 2 ! 2!8 @9" 923 7++ 1!+259 . 8"5 24 8B 2 3 5"B B 8B S 92 !68 + @28 4"!3 " 244 2 3 "" 7+..2! T + 3 3 " 8 2 + S 2 +! 9+ "!B + " 859"468 T " " 9+ D+!8 6 "! 9+ 923 9 8 927 2 3 1+4E 6") 1 9+ 3"5 "!L8 !" 3 521C 2 3 2 D+!.+! @ 9 2 8 4D+! !"3 @2 . " 9 B + A+1 9 8 859""4 B"!+ 92 @" 6+2!8 "!A 9"@+D+! $=>$ 2 3 $=>Q 5"B142 @28 B23+ 92 9+ 592 5+44"! @9" " .9 " "!+8 3+ 2 3 25 2446 4+5 !+ 2 3 A++1 859""4 @28 " E!+8 3+ +@28 25 248" +2 " +!+ "!3 55 B 42 " " B2 6 1!+ +!C B+ 8 9+ 82B+ 92 38 @28 3+8 !"6 . 9+ 52 9+3!24 2 3 5"44+. 2 + 59 !59+8 2 4L8 27" $=#< 9+ 7 89"1 I-2B+8 " 3 2 D 8 2 " 92 9+ 592 5+44"!L8 4+5 !+8 923 "! B2 6 6+2!8 7++ +.4+5 +3 2 3 923 1!25 52446 5+28+3 2 3 @9+ 5244+3 " " 3" 9 8 3 6 9+ 9+ 592 5+44"! 14+23+3 92 9+ 3++3 " $;#> !+R !+3 5" " 8 4+5 !+8 2 3 " 4+5 !+ 5" 2446 @28 2 5" 3 ") " .! +D" 8 2 3 92!3 " 1+! "!B ? 2 R 2 +J5 8+ "! " 4+5 B . 2 244 9+ 7 89"1 9+!+ "!+ B23+ 2 +@ 8 2 + 3+ . 5" " 8 " B+2 9!++ 3268 2 @++A "! 9+!+ @+!+ " 46 @" S 4+. 74+ T 3268 9+ @++A 9+ @" 3268 2 @++A 9+ + "!B2 " 9+ 592 5+44"!8 8++B " 92D+ 7++ 4+ !" 74+3 "! 9+ +.4+5 " 9+ ! 859""48 3@2!3 (L8 - 5 " 8 " 9+ 52 9+C 3!248 !2 9+! 4+88+ +D+ 9+ ! 1!+259 . 3 +8 2 5"4 "! 8 2 5+ 4 B . 9+B " @+4D+ 2 6+2! 4 I27+ 9L8 !+ . - 5 " 8 8C 8 +3 $PP< 1!"D 3+3) 92 9+ 592 5+44"! 89" 43 211" 2 4+5 !+! " !+23 9! 5+ 2 @++A 3 D 6 2 < 9+6 @+!+ 8 44 B2 2 +3 2 2 4L8 $P<> 76 92!346 2 6 " +D+ " 9+ B "! 52 " 8 "! D 52!8E 59"!24 2 + 3+3 9+B 9+ 4+5 !+8 @+!+ 2 6C 9"@ "4" .+! 9+ 92 5+44"!L8 59""48 / 9+ 9+"4". 524 859""48 " 9+ 92 5+44"! 36 . $=>#3 +3 $P=0 9+ D+!8 +8 1!"D 3+3 244 9+ 9+"4". 6 !+R !+3 +B1 8 92D+ R + !+5+ 46 28 2 5"4 2 3 ! !" 7++ B23+ "! !+D D+ 9+B 9+ 4+5 !+8 @+!+ 2 6C 9"@ "4" .+! 9+ 92 5+44"!L8 59""48 / 9+ 9+"4". 524 859""48 " 9+ 92 5+44"!8L 59""48 ++ " "! O + &"6 * + O + &"6 + 5

(? 9+ .4 89 " ! " 92 5+!6 928 2 B1"! 2 5+ 9 9 8 "!6 " 2 3 9+ 23B 8 !2 " +3 52C " !"B 9+ 25 92 9 8 5" ! M2 3 8 B"3+! !+1!+8+ 2 D+ 9+ 92 5+!6 D 8 " " 9+ .9 " ! " : 8 5+G +J+!5 8+8 2 - ! 8C 3 5 " "D+! ! 8 8 54 3 .+3 52 " 24 ! 8 8 2 3 1"88+88+8 B"!+"D+! 2 5+! 2 211+442 + - ! 83 5 " 9+ + .9 ++ 9 5+ !6 9+ 3 42 "!6 B+ 9"38 " 9+ " ! " 92 5+!6 923 2 .!+2 3+24 " 3" @ 9 9+ + 5 + 56 " 9+ .!2B B2! 859""48 " .42 3 9+ "! . " 9+ 211+442 + - ! 83 5 " " 9+ " ! " 92 5+!6 B2!A8 2 B1"! 2 8 2.+ 9+

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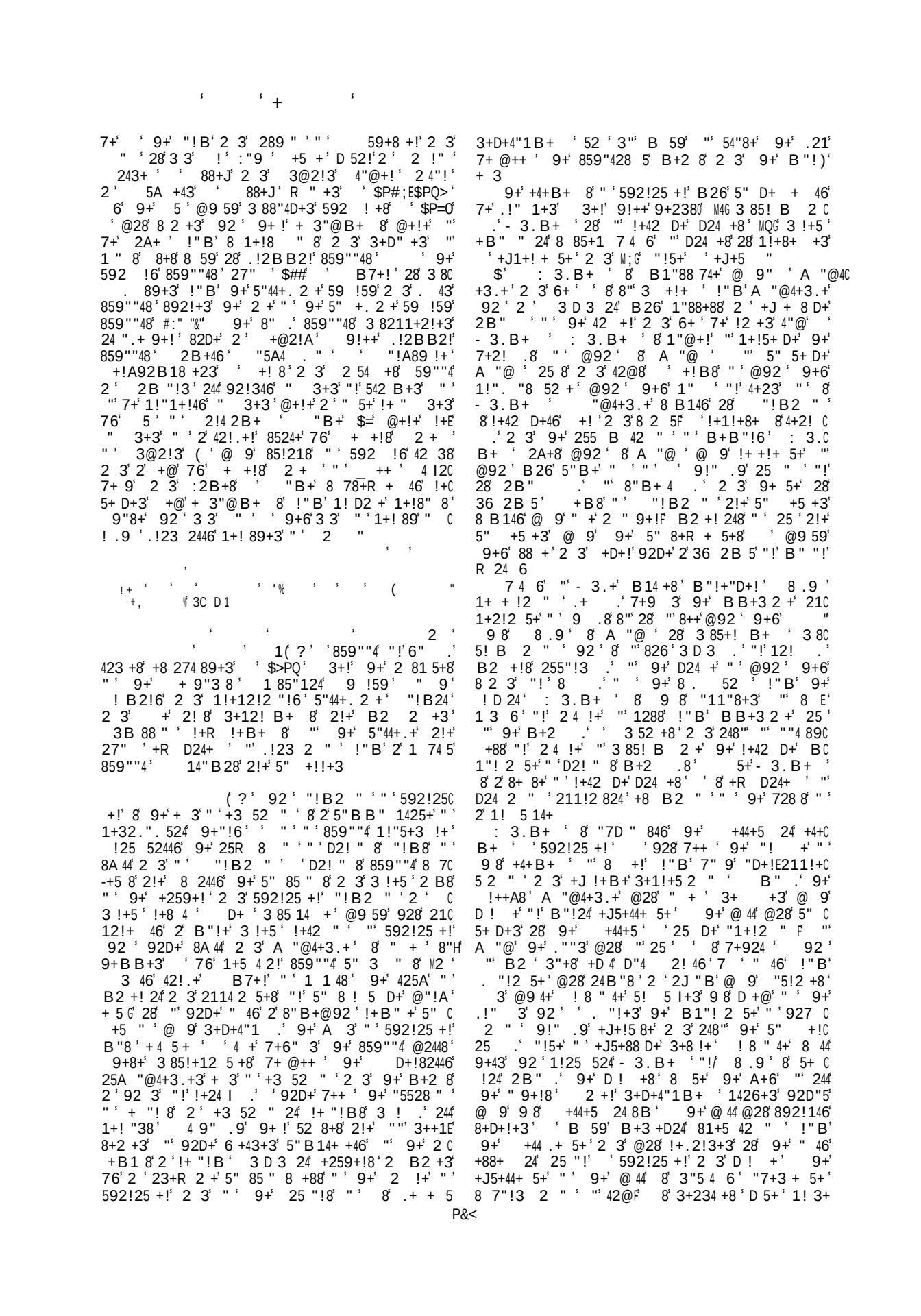
BˢS 592 !6Tˢ 8ˢ 8 2446ˢ 5" +3ˢ "ˢ 8B244+!ˢ +8 274 89B+ 8ˢ " ˢ 8+5 42!ˢ " "ˢ"!3 2!6ˢ1! +8 8ˢ 9+ˢ+2!4 +!ˢ592 ! +8ˢ@9 59ˢ 7+. ˢ2ˢ 9+ˢ+ 3ˢ" ˢ 9+ˢ @+4 9ˢ5+ !6ˢ2 3ˢ@+!+ˢ .+ +!2446ˢ 81+5 24ˢ + 3"@B+ 8ˢ "!ˢ 8 .4+ˢ 1! +8 8ˢ 2 259+3ˢ "ˢ 42!.+!ˢ " 32 " 8ˢ 8 59ˢ 28ˢ 9+ˢ .!+2ˢ 52 9+3!24ˢ 59 !59+8ˢ 9+!+ˢ @+!+ˢ "!ˢ C 8 2 5+ˢ P# 592 !6ˢ 1! +8 8ˢ 2ˢ ˢ 2 4L8ˢ 2 9+C 3!24ˢ Q=ˢ 2ˢ "!Aˢ 8 +!ˢ @9+!+ˢ 9+6ˢ @+!+ˢ C 5"!1"!2 +3ˢ "ˢ 2ˢ 8+12!2 +ˢ 9" .9ˢ 8 7"!3 2 +ˢ 5"44+.+ˢ ˢ $=&# $&ˢ2ˢ " 9@+44ˢ 8 +!ˢ2 3ˢ8"ˢ " ˢ 9+8+ˢ 923ˢ " 9 .ˢ "ˢ 3"ˢ @ 9ˢ +3 52 " ˢ +J5+1ˢ 92ˢ ˢ @28ˢ 8 24ˢ "ˢ 8 114+B+ ˢ 9+ˢ B 8+!274+ˢ 8 1+ 38ˢ " ˢ LXˢ 2ˢ 6+2!ˢ "!ˢ 8"ˢ @9 59ˢ @+!+ˢ 9+ˢ 2 5+ ˢ 2 3ˢ 255 8 "B+3ˢ 126ˢ " ˢ 9+ˢ .!2B B2!ˢ "!ˢ " ˢ 9+ˢ 8" .ˢ 859""4B28 +!8ˢ " ˢ 9+ˢ .!+2ˢ2 3ˢ2 5+ ˢ59 !59+8ˢ76ˢ211" .ˢ 9+Bˢ 248"ˢ "ˢ 592 ! +8ˢ M ++ˢ ! !&ˢ0+ &"4ˢ 9 8ˢ 2ˢ " 9@+44ˢ 8 +!ˢ ˢ $P#=ˢ@9+ ˢ ˢ 97+! L8 592 !6ˢ +44ˢ D252 ˢ76ˢ 9+ˢ 3+2 9ˢ ˢ"ˢ 44 2Bˢ 2! 9"!1ˢ@9"ˢ 923ˢ "!ˢ B2 6ˢ 6+2!8ˢ 7++ ˢ 25 .ˢ B28 +!ˢ " ˢ 9+ˢ .!2B B2!ˢ 859""4ˢ 2 3ˢ " +ˢ" ˢ 9+ˢ 52 " 8L D 52!8ˢ76ˢ2ˢ8"!ˢ" ˢ 1!+C 85! 1 D+ˢ! .9ˢ28A+3ˢ "ˢ 7+ˢ 1!+8+ +3ˢ "ˢ ˢ 9+ˢ 5921 +!ˢ 28A+3ˢ 9 Bˢ "ˢ @2 D+ˢ 9 8ˢ 542 Bˢ ˢ"!3+!ˢ 92ˢ 9+6ˢ B .9ˢ 1!+8+ ˢ "ˢ ˢ 2ˢ ˢ 592142 ˢ @9"ˢ @" 43ˢ 7+ˢ 274+ˢ "ˢ +259ˢ 9+ˢ .!2B B2!ˢ 859""4ˢ 9+ˢ 542 Bˢ @28ˢ @2 D+3ˢ 2 3ˢ 2 " 9+!ˢ B2 ˢ211" +3ˢ @9"ˢ 8@"!+ˢ D"4 2! 46ˢ " ˢ 23C B 88 " ˢ "ˢ +259ˢ 9+ˢ .!2B B2!ˢ859""4ˢ @9 4+ˢ 9+ˢ 9+43ˢ 9+ˢ 592 !6 9+ˢ 25ˢ@28ˢ 92ˢ 9+ˢ 592 !6ˢ 3 +8ˢ "55 C 1 +3ˢ 2ˢ D+!6ˢ 8B244ˢ 1"! " ˢ " ˢ 9+ˢ 326ˢ 2 3ˢ ˢ @28ˢ 8"" ˢ3 85"D+!+3ˢ 92ˢ ˢ 9+ˢ +!+8 8ˢ " ˢ 9+ˢ B"!248ˢ " ˢ 9+ˢ 592 !6ˢ 1! +8 8ˢ 9+B8+4D+8ˢ ˢ @28ˢ 3+8 !274+ˢ "ˢ 3ˢ 9+Bˢ " 9+!ˢ @"!Aˢ "ˢ 3" ˢ ˢ 9+ˢ 9 ! ++ 9ˢ 5+ !6ˢ 2 3ˢ " @2!38ˢ @9+ ˢ 9+8+ˢ 592 ! +8ˢ 7+.2ˢ "ˢ 7+ˢ +8 274 89+3ˢ 244ˢ "D+!ˢ 9+ˢ 5" !6ˢ 9+ˢ 1! +8 8ˢ @+!+ˢ 42!.+46ˢ 4 I+3ˢ 28ˢ @92ˢ 2!+ˢ "@ˢ 5244+3ˢ 5 !2 +8ˢ 1!"1+!46ˢ 81+2A .ˢ288 8 2 ˢ 5 !2 +8ˢ2 3ˢ 5 BC 7+ 8ˢ " ˢ 5921+48ˢ " ˢ +28+ˢ 9+6ˢ 923ˢ "ˢ 288 8ˢ 9+ˢ 12! 89ˢ 1! +8 ˢ 59" !ˢ 2 3ˢ 248"ˢ ˢ 12!"59 24ˢ @"!Aˢ B" .ˢ" 9+!ˢ +554+8 28 524ˢ+B14"6B+ 8ˢ 92ˢ"ˢ +259 .ˢ859""4ˢ@28ˢ+2!46ˢ!+5". I+3ˢ28ˢ " +ˢ " ˢ 9+ˢ B"8ˢ 8+ 4ˢ "ˢ @9 59ˢ 9+ˢ 592 !6ˢ 1! +8ˢ5" 43ˢ7+ˢ1 ˢ ˢ 8ˢ3 5 4ˢ "ˢ 826ˢ@9 59ˢ 8ˢ 9+ˢ+2!4 +8ˢ528+ˢ " ˢ 9+8+ˢ592 !6ˢ 1! +8 8ˢ 7+C .ˢ3 !+5 +3ˢ 76ˢ 9+ˢ " 3+!ˢ "ˢ A++1ˢ 2ˢ 859""4ˢ 8ˢ 9+ˢ " 32 " ˢ 8 2 +8ˢ 2!+ˢ D+!6ˢ !2!+46ˢ "! 95"B .ˢ2 3ˢ 9+ˢ4 5+ 8+ˢ ˢ B"! B2 ˢ 92ˢ 8ˢ+J+B1 " ˢ !"Bˢ 9+ˢ 2 +ˢ" ˢ "! B2 ˢ" ˢ 3@2!3ˢ ˢ @9 59ˢ 5" 852 +3ˢ 42 38ˢ . D+ ˢ "ˢ !+4 . " 8ˢ 5"!1"!2 " 8ˢ "ˢ 9+ˢ .ˢ 92!346ˢ+D+!ˢ B+ " 8ˢ 2 6 9 .ˢ 7 ˢ 9+ˢ 592 !6ˢ !"7C 2746ˢ 2B" .ˢ 9+ˢ +2!4 +8ˢ A "@ˢ 2!+ˢ 9"8+ˢ " ˢ !+@A+! +ˢ ˢ "B+!8+ ˢ " 3+3ˢ ˢ $;$#ˢ 2!C 4"@ˢ 88+Jˢ ˢ $;Q=ˢ " ˢ "4 " E 1" E +! ˢ ˢ "!A89 !+ˢ ˢ $;Q>ˢ 9 @+ ˢ ˢ 42 3ˢ ˢ $;=Pˢ ˢ $;>=ˢ @9+ˢ 236ˢ +!A+4+6ˢ M.+G " 3+3 9+!ˢ 592 !6ˢ 859""4ˢ 2ˢ "" " E 3+!E 3.+ˢ ˢ 4" 5+8 +!89 !+ˢ @+ˢ .+ˢ 1+!9218ˢ 9+ˢ +2!4 +8ˢ 528+ˢ ˢ @9 59ˢ 9+ˢ4 5+ 8+ˢ ˢ B"! B2 ˢ 81+5 C 52446ˢ B+ " 8ˢ 9+ˢ 592 !6ˢ 8+3ˢ 248"ˢ "!ˢ 2ˢ 859""4ˢ ˢ 42!.+ˢ B7+!ˢ "ˢ 592 ! +8ˢ @9 59ˢ @+!+ˢ 248"ˢ 859""48ˢ 2!+ˢ !+1 +3ˢ "ˢ 92D+ˢ 7++ ˢ " 3+3ˢ ˢ $;<# 2 3ˢ 9+ˢ B B+3 2 +46ˢ8 55++3C .ˢ6+2!8ˢ7 ˢ2ˢ .!+2ˢ B2 6ˢ"ˢ 9+8+ˢ @+!+ˢ 1!+C D " 846ˢ +J 8 .ˢ " 32 " 8ˢ @9 59ˢ 923ˢ 9+ˢ "ˢ 2A+ˢ " ˢ 95+ 8+8ˢ ˢ B"! B2 ˢ ˢ 5" 8+C R + 5+ˢ "ˢ 9+ˢ R !6ˢ "ˢ . 438ˢ @9 59ˢ C 54 3+3ˢ B2 6ˢ592 !6ˢ1! +8 8ˢ"!3+!+3ˢ2 +!ˢ 9+ˢ +282 8Lˢ +D"4 ˢ ˢ 7+52B+ˢ 2ˢ " ˢ 5"BC B" ˢ1!25 5+ˢ "ˢ " 3ˢ ˢ B 2 " ˢ " ˢ 9+ˢ5"4C 4+. 2 +ˢ59 !59+8ˢ2ˢ592 !6ˢ" ˢ @"ˢ1! +8 8ˢ" +ˢ "ˢ +259ˢ 2ˢ .!2B B2!ˢ 859""4ˢ2 3ˢ 9+ˢ" 9+!ˢ 2ˢ8" .ˢ 859""4ˢ 9 8ˢ @28ˢ 3" +ˢ 76ˢ 2 .4+6ˢ 89"1ˢ" ˢ !92B ˢ2ˢ !92Bˢ ˢ $=$Qˢ2ˢ 4 @ 5Aˢ 76ˢ2ˢ +!56ˢ 44 2Bˢ" ˢ 4 @ 5Aˢ 89"1ˢ" ˢ 5"4 ˢ ˢ $==Pˢ2ˢ "@5+8 +!ˢ 76ˢ !593+25" ˢ 1" +ˢ ˢ $==<ˢ 9+!+ˢ3"+8ˢ " ˢ8++Bˢ "ˢ7+ˢ2 6ˢ81+5 24ˢ +1"59ˢ B"!+ˢ 3 8 . 89+3ˢ 92ˢ 2 " 9+!ˢ "!ˢ " 3 .ˢ 9+8+ˢ 592 !6ˢ 859""48ˢ 9+!+ˢ @28ˢ 2ˢ 5" 8 3+!274+ˢ " 7 !8ˢ ˢ 9+ˢ 42 +!ˢ 3268ˢ " ˢ 3@2!3ˢ ˢ 2 6ˢ @+!+ˢ " 3+3ˢ 3 ! .ˢ 9+ˢ !+ .ˢ"ˢ + !6ˢ (ˢ 4ˢ 9+ˢ 2!8ˢ " ˢ 9+ˢ "8+8ˢ 1 ˢ2ˢ 8 "1ˢ "ˢ 9+ˢ B"D+B+ ˢ2 3ˢ ˢ 7+.2 ˢ @ 9ˢ !+ +@+3ˢ D ."!ˢ 28ˢ 8"" ˢ 28ˢ 9 .8ˢ 8+ 4+3ˢ 3"@ ˢ !"Bˢ27" ˢ $=0Pˢ " @2!38ˢ 9+ˢ !+ .ˢ" ˢ + !6ˢ (ˢ@28ˢ "ˢ B"!+ˢ3 8 . 89+3ˢ "!ˢ 9+ˢ " 32 " ˢ " ˢ 859""48ˢ 92ˢ 92ˢ" ˢ 9 8ˢ 2 9+!ˢ "!ˢ " ˢ + !6ˢ (ˢ 46ˢ ˢ 9+ˢ42 +!ˢ 12! ˢ " ˢ 9 8ˢ !+ .ˢ@9+ ˢ3 88"4 " ˢ 211+2!+3ˢ "ˢ 7+ˢ BC 1+ 3 .ˢ@+!+ˢ B2 6ˢ592 ! +8ˢ " ˢ859""48ˢ 76ˢ " 32 " ˢ5" D+! +3ˢ " 859""4ˢ " 32 " 8ˢ 9+ˢ592 !6ˢ859""48ˢ@+!+ˢ +2!46ˢ 244ˢ !"Bˢ 9+ˢ 7+. .ˢ !++ˢ859""48ˢ@9 59ˢ B+2 8ˢ !++ˢ !"Bˢ " ˢ ++8ˢ 2 3ˢ @28ˢ 24@268ˢ 8"ˢ 3+!8 ""3ˢ 4ˢ 9+ˢ 9+"!6ˢ@28ˢ8 2! +3ˢ76ˢ !ˢ + +36ˢ ˢ $>&Pˢ 92ˢ ˢ B+2 ˢ !++ˢ !"Bˢ +554+8 28 524ˢ 5" !"4ˢ@9 59ˢ 4ˢ $&0#ˢ M8++ˢ * +ˢ0+ &"ˢ 2 3ˢ !))ˢ !(4ˢ "ˢ859""4ˢ+D+!ˢ@28ˢ "B+ˢ 8 59ˢ28ˢ 2 .4+6L8ˢ " 32 " ˢ2ˢ !92Bˢ@+!+ˢ !++ˢ " 46ˢ "ˢ1""!ˢ59 43!+ ˢ@9"8+ˢ12!+ 8ˢ28A+3ˢ "!ˢ ˢ 8"B+ˢ@+!+ˢ !++ˢ " 46ˢ "!ˢ 12! 89 " +!8ˢ 7 ˢ B"8ˢ@+!+ˢ !++ˢ24 ".+ 9+!ˢ 9+ˢ1! +8ˢ7+ .ˢ !+R !+3ˢ "ˢ Sˢ +259ˢ.!2 8ˢ@ 9" ˢ28A .ˢ2 6C 9 .ˢ7+6" 3ˢ9 8 8 1+ 3ˢ "!ˢ9 8ˢ 12 8Tˢ +ˢ 8 .42!ˢ " 32 " ˢ 92ˢ"ˢ ˢ !6 3ˢ !L8ˢ 92 C !6ˢ 2ˢ +@42 3ˢ ˢ 4" 5+8 +!89 !+ˢ @28ˢ "ˢ Sˢ A+1+ˢ 2ˢ .!2B B+!ˢ 85""4+ˢ 924 E !++ˢ 92ˢ 68ˢ 2A .ˢ" ˢ 85"4+!8ˢ4+B .ˢ.!2B+!ˢ >3ˢ 9+ˢ R 2!C +!ˢ 2 3ˢ" ˢ" 9+!8ˢ4+! .ˢ "ˢ !+3+ˢ=3 Tˢ 9 8ˢ @28ˢ 2ˢ 2 +B1ˢ@9 59ˢ 928ˢ 7++ˢ" + ˢ B23+ˢ 2 3ˢ D2! 2746ˢ@ 9" ˢ8 55+88ˢ "ˢ 5"B7 +ˢ 2ˢ 8+5" 32!6ˢ859""4ˢ2 3ˢ2 ˢ+4+B+ 2!6ˢ859""4ˢ " +ˢ 8ˢ2ˢ! 4+ˢ 9+ˢ 8" .ˢ859""4ˢ@28ˢ 9+ˢ+4+C B+ 2!6ˢ859""4ˢ2 3ˢ 92ˢ@28ˢ@96ˢ 9+ˢ @"ˢ@+!+ˢ " 3+3ˢ ˢ 12 !8ˢ 9+ˢ 592 !6ˢ .!2B B2!ˢ 859""48ˢ @+!+ˢ + 3+3ˢ "ˢ 3"ˢ 9+ˢ 82B+ˢ @"!Aˢ 28ˢ 9+ˢ .!+2ˢ 52 9+3!24ˢ 2 3ˢ 5"44+. 2 +ˢ 859""48ˢ 2 3ˢ 1!+12!+ˢ 7"68ˢ "!ˢ 9+ˢ D+!8 +8ˢ 28ˢ B26ˢ 7+ˢ B"8ˢ 54+2!46ˢ 8++ ˢ !"Bˢ 8 59ˢ 8 2 5+8ˢ 28ˢ B7"! +ˢ @9+!+ˢ 9+ˢ 236ˢ 2!.2!+ ˢ B" 9+!ˢ "ˢ + !6ˢ (ˢ3 !+5 +3ˢ M5ˢ $=<OG 92ˢ ˢ 89" 43



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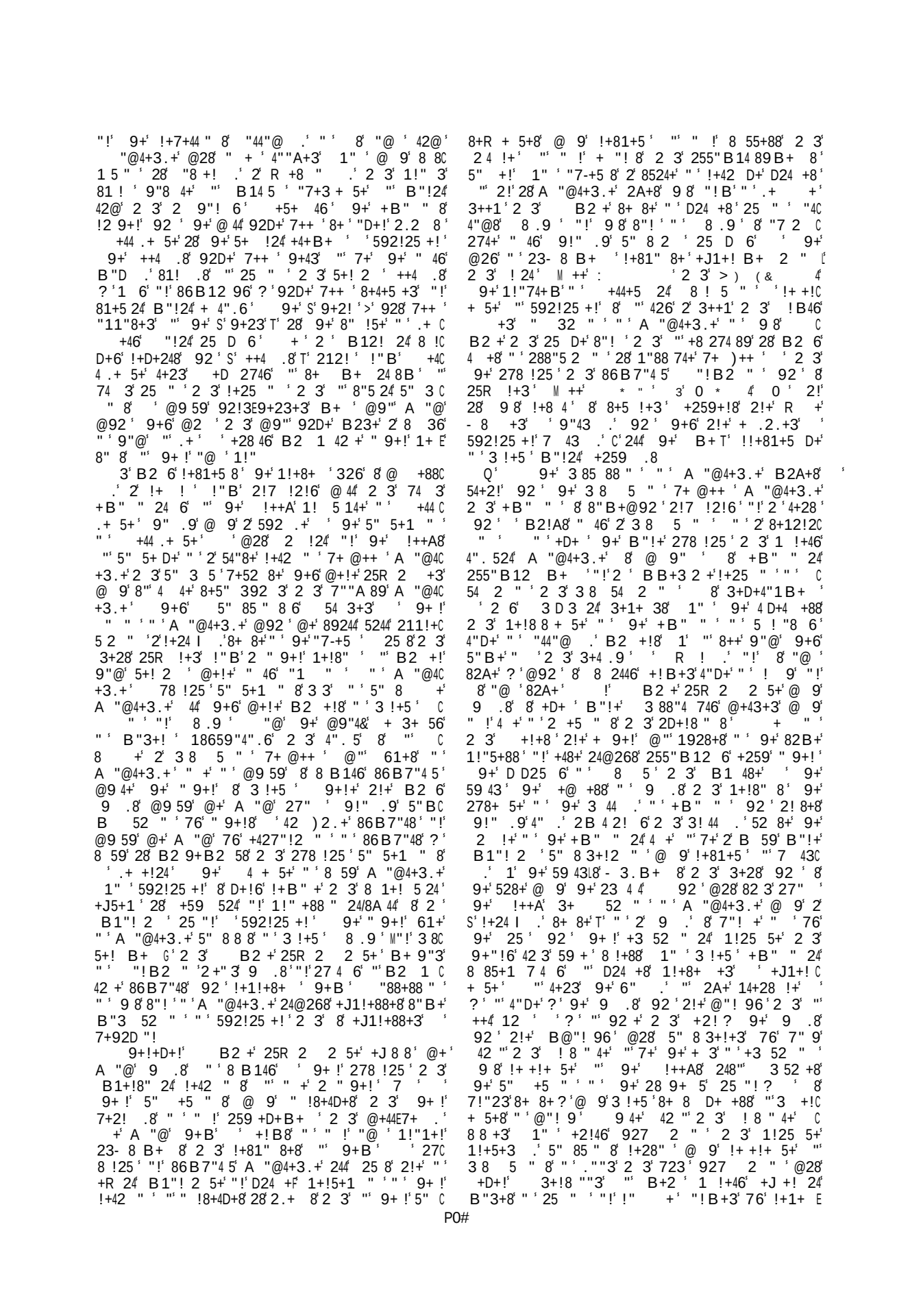

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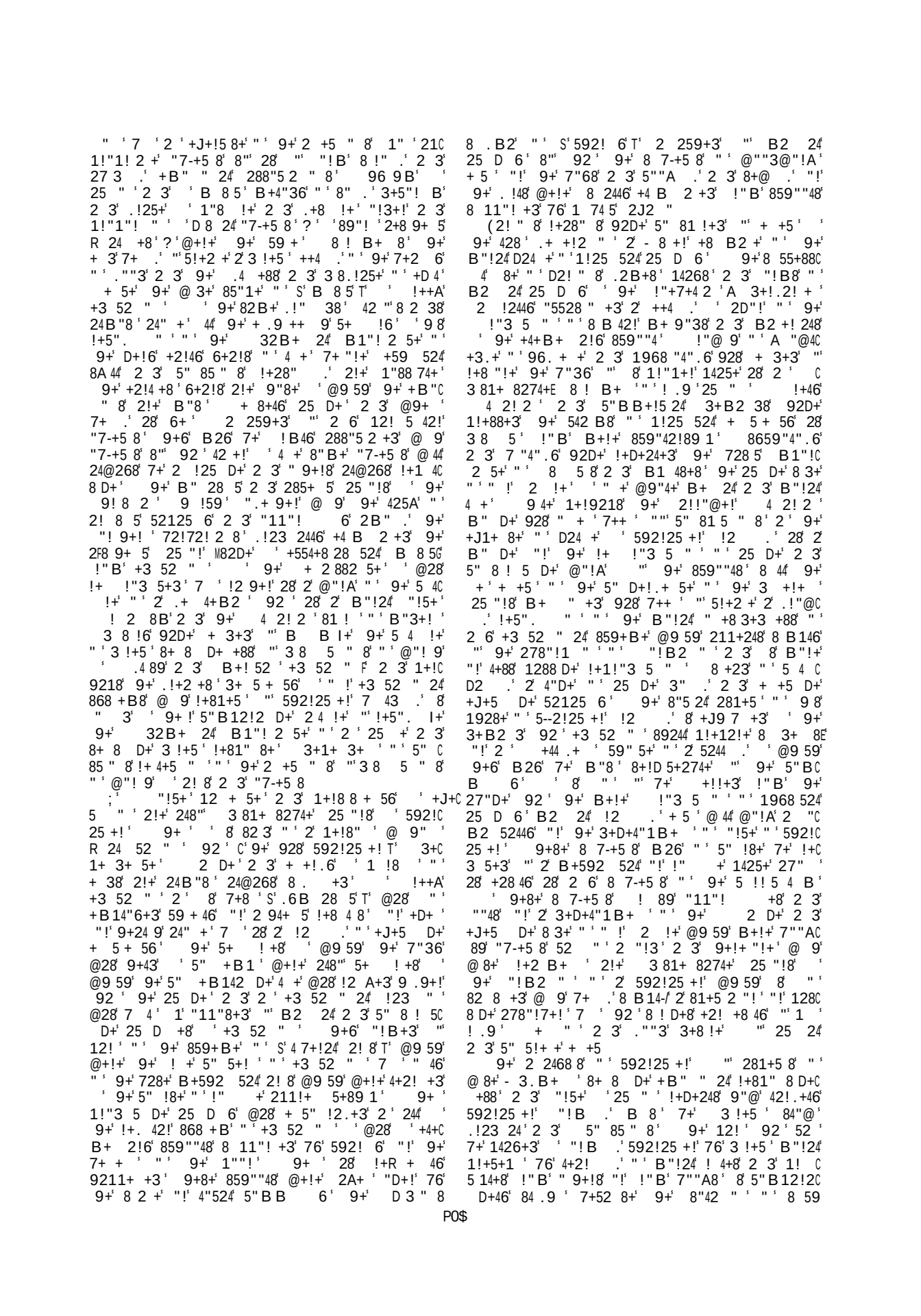

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the older colleges and universities, and PHILANTHROPY, EDUCATIONAL. J. E. G. DE M.

CHARITY, EDUCATIONAL ASPECTS OF MODERN. — See PHILANTHROPY, EDUCATIONAL ASPECTS OF MODERN.

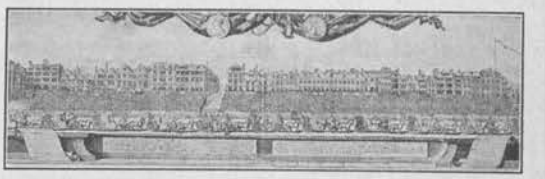
CHARITY SCHOOL. — In its narrower sense a term applied to a particular type of school which sprang up in England during the latter half of the seventeenth century and flourished throughout the eighteenth century. Such a school was open free to the children of the poor, and usually attended only by such; was supported ordinarily by private contribution; and most frequently was controlled by some ecclesiastical or religious body. The institution itself was common in America and on the Continent during the same period, but the term was not so frequently used.

It would be difficult to exaggerate the importance for England of the history of the educational movement which is always connected with the name of the charity schools, for this movement, in association with the school endowment movement that took place between 1670 and 1730, and the Sunday school movement (*q.v.*), which began soon after 1750, laid the foundations upon which was reared during the nineteenth century the English system of elementary education. It is not easy to indicate the exact origin of the charity school movement. Upon this question opinions differ. It is probable that the establishment of the charity schools that rapidly covered England in the early years of the eighteenth century was only one manifestation of a wider movement which not only includes the school endowment movement of 1670–1730, and extends back to include Griffith Jones' Circulating Schools, but stretches back to certain movements in the mid-sixteenth century and forward to the monitorial schools in the early nineteenth century. The medieval system of elementary education, though not absolutely destroyed by the Reformation, received shock after shock from the forces that the Reformation set in motion. The destruction of the chantry elementary schools (*q.v.*) in 1548 swept away a great educational instrument, and though the fundamental idea of *parochial* education survived the Reformation and survives to this day, yet the organized practice of parochial teaching decayed. It was necessary from the middle of the sixteenth century to restore the parochial ideal and the parochial schools. Much was done, but the conformity legislation and the system of episcopal licenses for teachers made it increasingly difficult, as time went on, to find sufficient teachers of sound churchmanship, and this difficulty became insuperable when the conformity legislation of 1662 and 1665 instituted an inquisition into the opinions of teachers at a time when the aftermath of the Great Revolution of 1649 made it impossible for thousands of earnest teachers to accept the tenets of the established church. Hence we might expect to find, as we do find, successive efforts, parochial in their results, but often extra-parochial in their origin, to create an elementary system of education which should be, at any rate, not less efficient for its time and generation than the elementary system which during the Middle Ages in face of numberless disadvantages did such admirable work in the matter both of character forming and of preparing a percentage of children for higher education. But these successive efforts were continually checked by political, religious, social, and economic hindrances. In the second half of the sixteenth century substantial results were achieved, but these were largely neutralized by the political and religious unrest of England from (say) 1625 to 1660. The conformity legislation of 1662–1665 gave a definite check to all forms of education, and the tremendous efforts of the century that followed, shown in the founding of charity schools, endowed elementary schools and Sunday schools, were unable to overcome the *vis inertiae* of a state policy which had denuded the universities and cut off the supply of trained teachers. There was little or no trained teaching in the eighteenth century in England, and when the great monitorial school revival under Bell and Lancaster came at the very end of the century there were no teachers available, while the new industrial movement with its vast aggregations of population had created social and economic obstacles to progress which have only been quite recently overcome. Thus there was one long, organic, wavelike movement from about 1570 to 1870, a succession of impulses which represent the relationship of the Renaissance to elementary education.

Charity school, Bunyan Meeting House, London.

The exact place of the charity schools in this long movement must be described. The barbarism of Wales seems to have been the object lesson which drew men's attention to needs nearer home. When that most learned

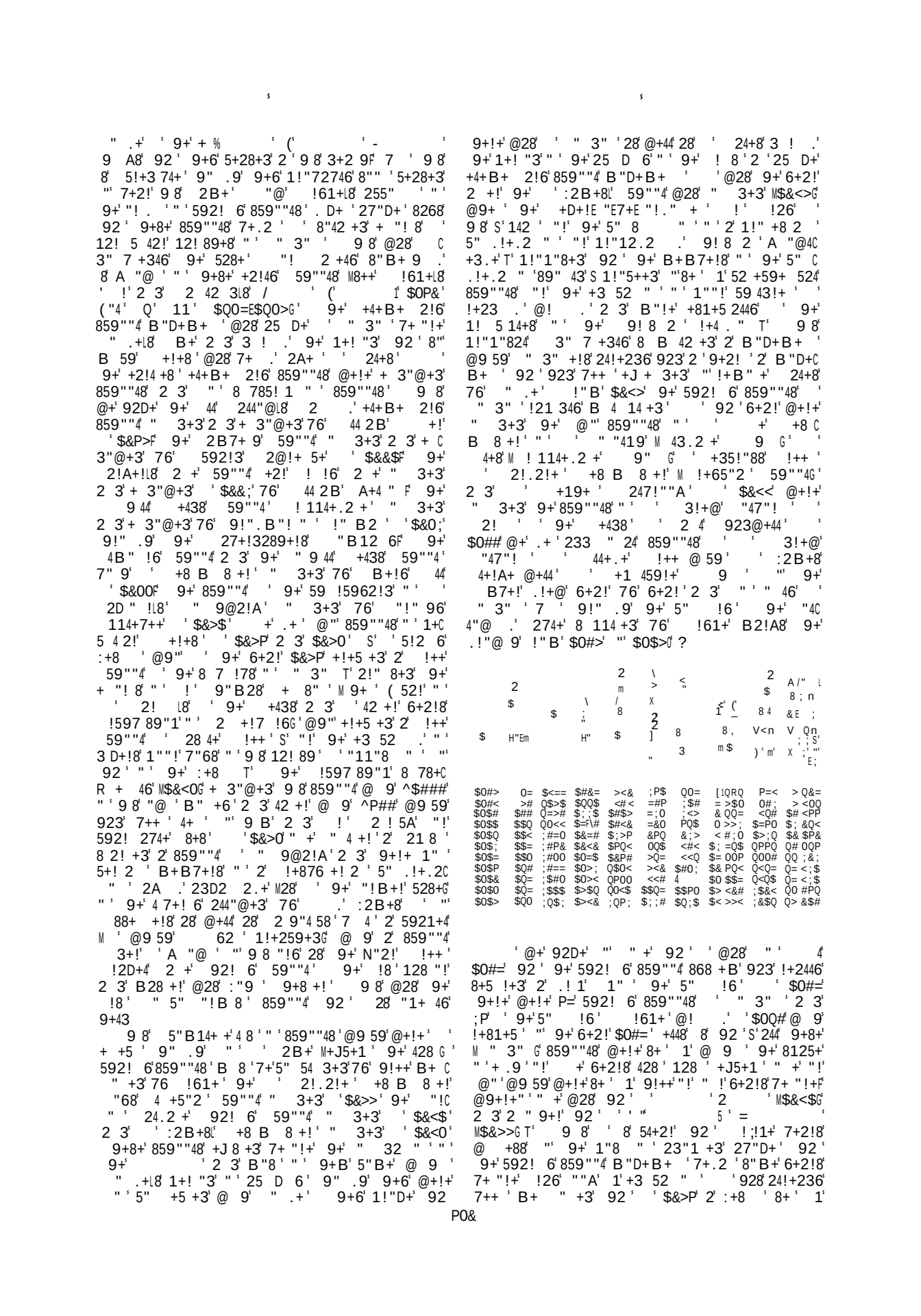
man, William Salesbury, in 1550 translated into Welsh the Gospels and Epistles as used in the Book of Common Prayer, he gave a new impetus to the old movement which led to the translation into Welsh under the patronage of Parliament (5 Eliz., *c.* 28) of the New Testament. The evangelization of Wales drew men's minds to the same need in England, and it must be remembered that this whole movement was essentially religious. A complete Welsh Bible was issued from London in 1588 and "a portably-sized Bible" was, in 1630, "printed at the expense of one or more citizens of London." The spiritual needs of Wales were very close to the heart of London, and not very long after the time of the Welsh Bible of 1630, Vavasor Powell began active evangelizing work in Wales. This was followed by the Commonwealth Act of 1649, which appointed Church and School Commissioners for Wales to grant (among other duties) certificates to schoolmasters in order that "fit persons of approved piety and learning may have encouragement to employ themselves in the education of children in piety and good literature"; and lastly we reach the stage in which the evangelization of Wales finally reacts on London and England and creates the impulse which produces the charity schools. This last stage was due to the efforts of Thomas Gouge (*q.v.*), a clergyman of the Established Church, who, having been ejected from his London living under the Act of Uniformity on St. Bartholomew's Day, 1662, eventually took up in 1672 the Welsh social and educational work, which still attracted the attention of philanthropic Londoners. Gouge in taking up this work was following up the ideas of Joseph Alleine (1636–1668), another nonconforming clergyman of fame. On Gouge's "first journey into the borders of South Wales he inquired in each town how many were willing that their children should learn to read and write English, and to repeat the catechism. He engaged teachers for both sexes, paying them at the rate of 1*d.* or 2*d.* a week per scholar" (see *Dict. of Nat. Biog.*). Strype's edition in 1720, of Stow's *Survey of London*, must now be quoted. Writing on the charity schools in his time, he says: "This favour of the Londoners towards poor children began divers years ago, in North and South Wales. When, about the year 1670, the Poverty and Ignorance of those Parts raised a compassion in the Hearts of many good citizens, which must be recorded to their Honor: so that they and their Interest contributed such sums of Money, as maintained a great number of poor Welch Children at School, to read English, write, and cast Accompts; and Schools for that Purpose were erected and settled in many Places in those Countries; and this pious Practice so flourished that in the year 1674, or 1675, Certificate was made that, in eighty-six of the chief Towns and Parishes in Wales, 1162 poor children were put to School, over and above 200 put to School the last year by the Charity of others. And this Charity had already provoked divers landlords and Inhabitants of several Towns and Parishes in Wales to put 863 of the poorest Welch Children to School, upon their own Accounts; so that 2225, in all, were already put to school to learn, as before." The movement did not end with education. Gouge desired to furnish the rest of the Welsh people "with Christian Knowledge." Gouge started the distribution of religious books, and for this purpose a famous Trust was formed in London consisting of Churchmen and nonconformists: Tillotson, Whichcot, Simon Ford, Bates,



Children of the Charity Schools viewing a Royal Procession; London, 1713.

Owtram, Patrick, Stillingfleet, and Fowler were the Churchmen; Durham, Meriton, Hezekiah Burton, Richard Baxter, Matthew Poole, and Gouge were the nonconformists. Various citizens of London, Thomas Firmin, Henry Norton, John DuBois, and others also joined. The committee did excellent work, but after Gouge's death in 1681 the results declined.

Now the point that is in doubt and which must be considered is whether these charity schools were directly connected with Gouge, his school movement, and the Trust of 1674. It is necessary to consider briefly the history of elementary education between this date and the date of the formation of the Society for Promoting Children's Knowledge (*q.v.*) which was founded by Dr. Bray (*q.v.*) in 1698, and admittedly controlled in a very large measure the charity schools from about that time. In 1674 Baxter and Tillotson, both signatories to the Trust, drew up a "Healing Bill" for a union between conformists and nonconformists and allowing dissenters in certain cases to be schoolmasters. The proposal fell through in April, as the Bishops would not concur. Almost at this very date the Report of the Trust was issued, and certainly Gouge and Tillotson remained on intimate terms, as in 1681 Tillotson preached Gouge's funeral sermon in "a strain of fervid eulogy." The Trust continued after Gouge's death, for we know that the distribution of Welsh Bibles, one of the objects of the Trust, continued. There is no real reason to suppose that the Welsh schools, which contained 1850 children in 1675, suddenly ceased to exist in 1681 on Gouge's death; especially as they were in part supported by Welsh voluntary subscriptions. The writer on



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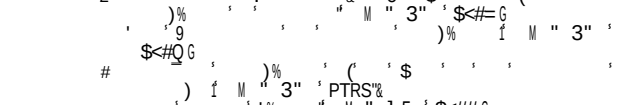

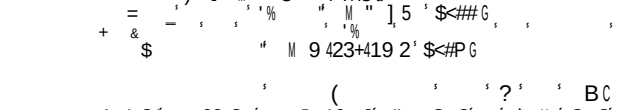

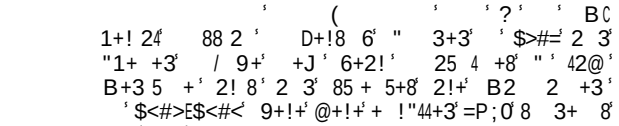

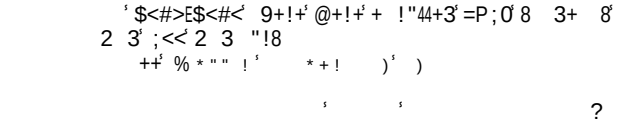

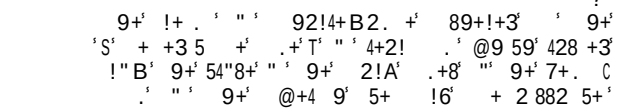

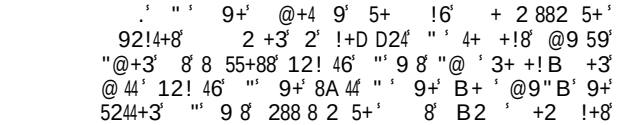

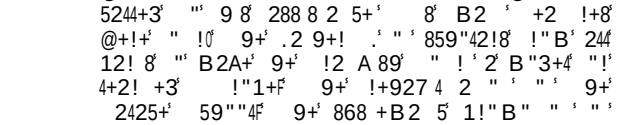

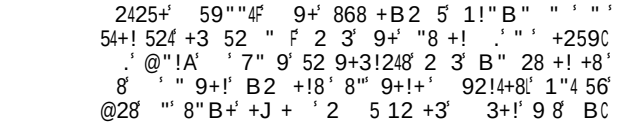

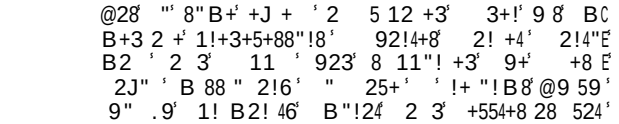

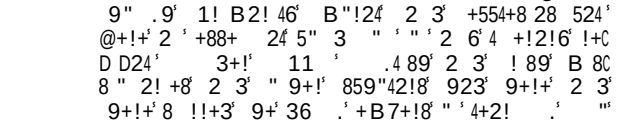

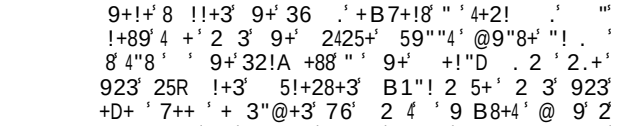

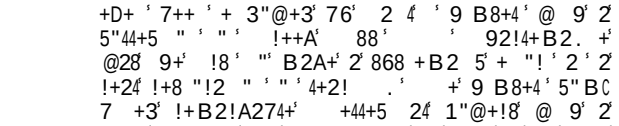

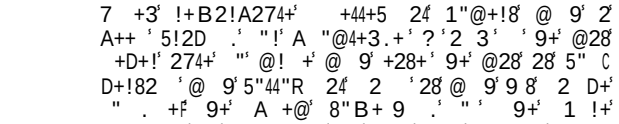

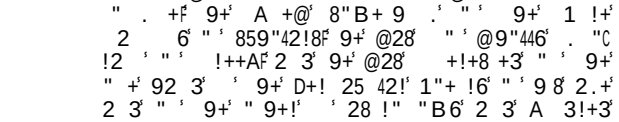

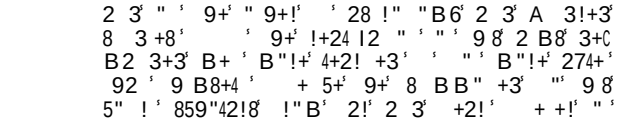

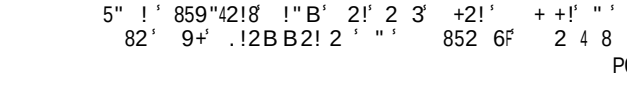

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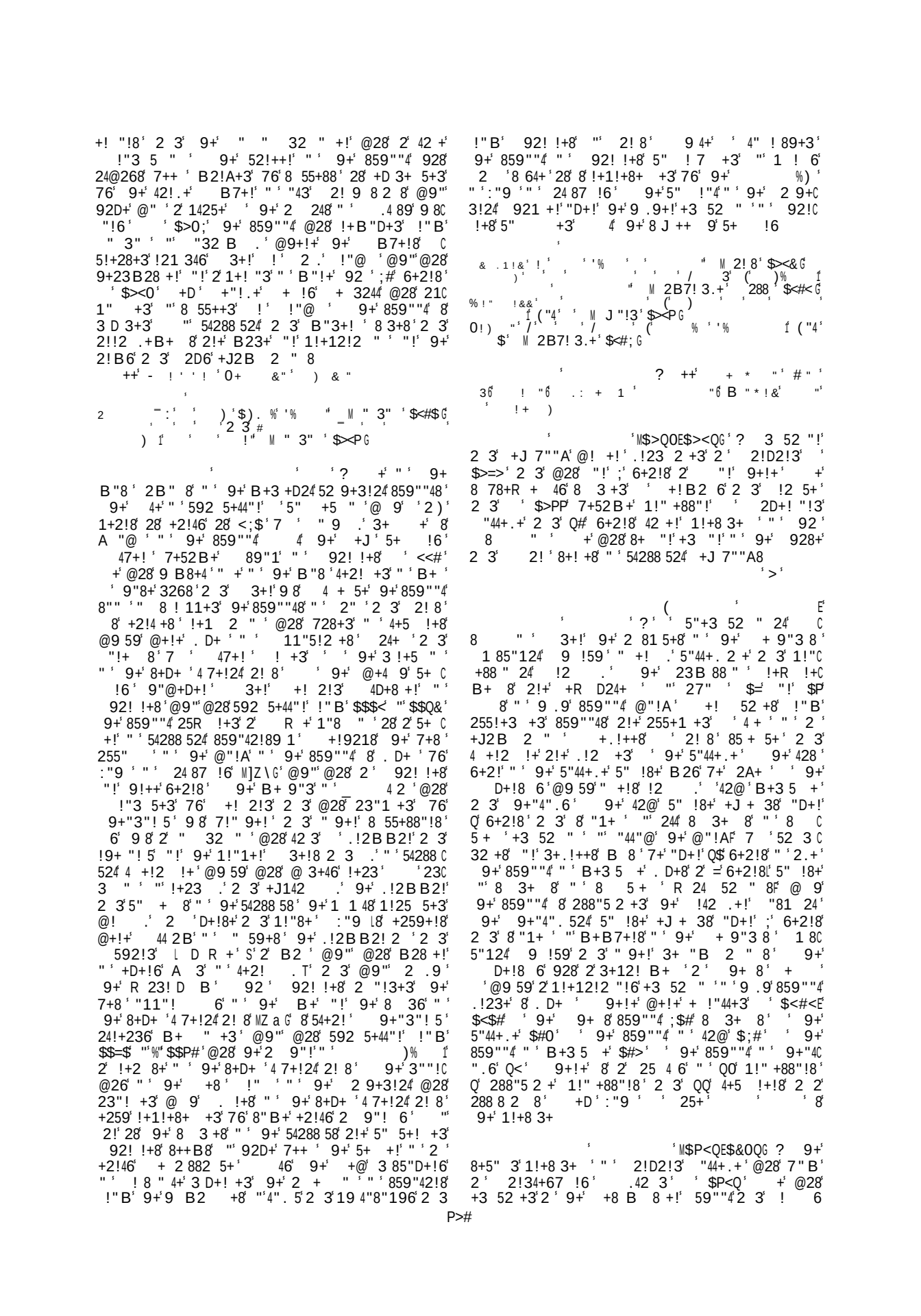

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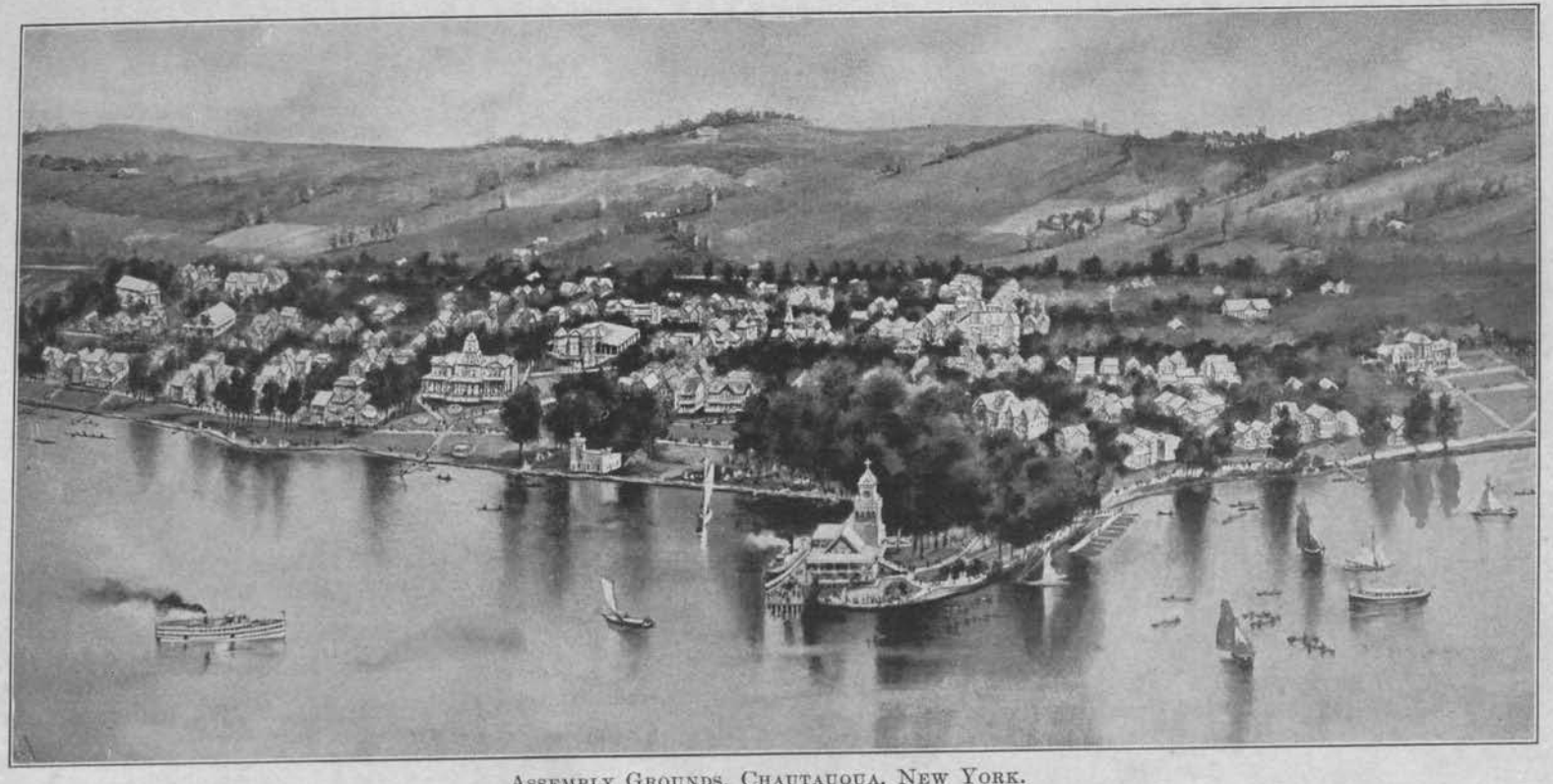

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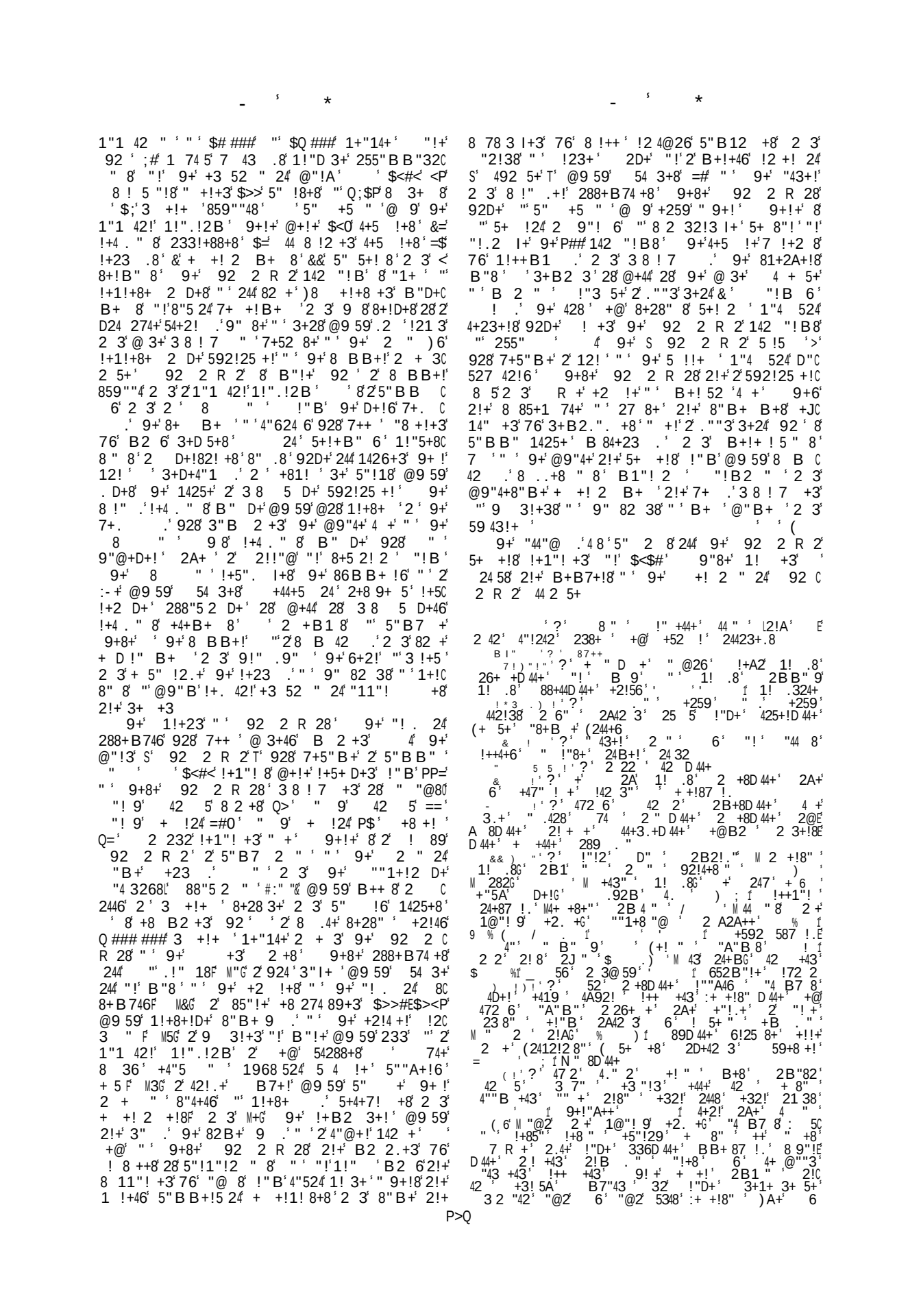

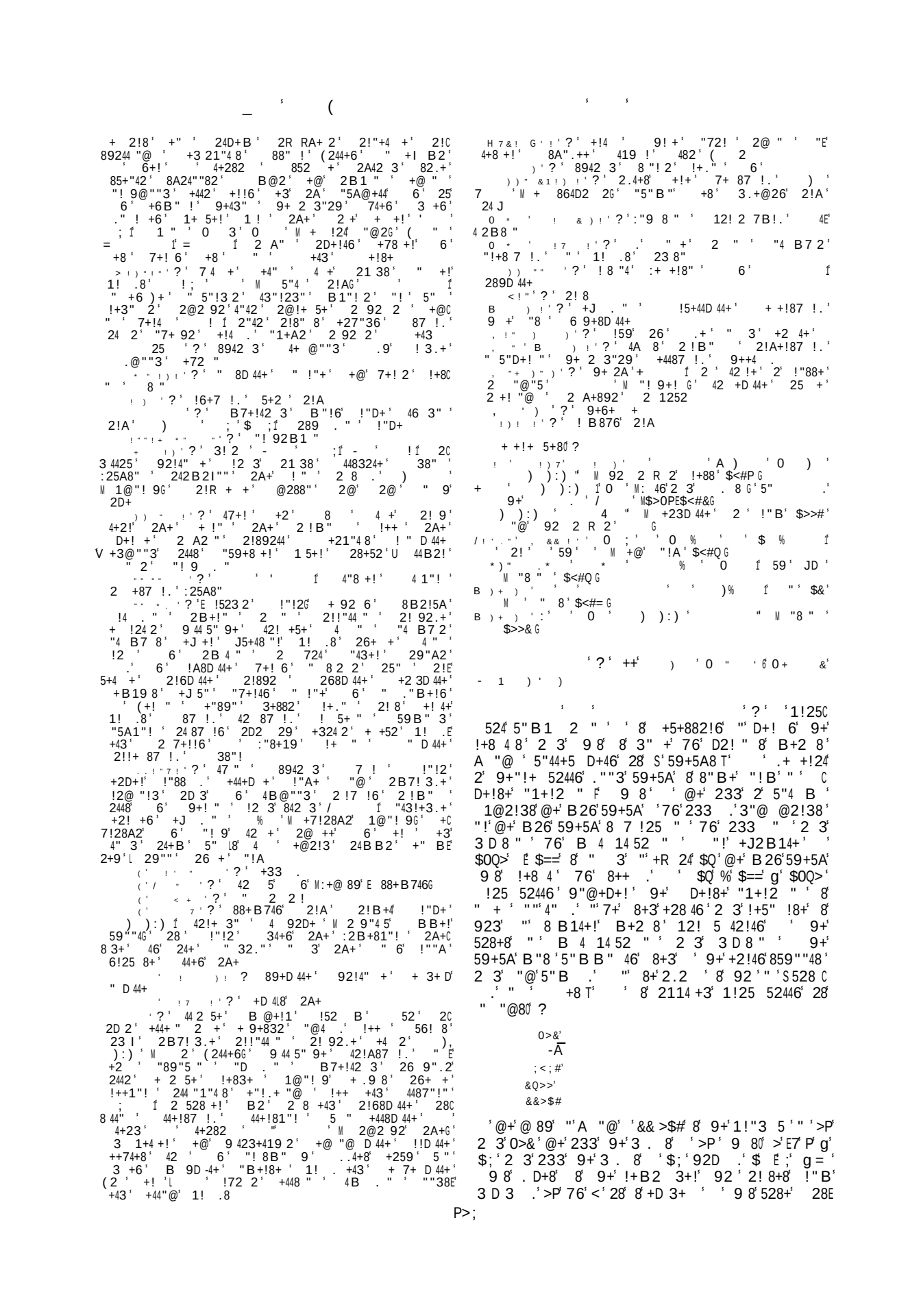

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Born in Cambridge in 1514, he proceeded to St. John's College, where he became fellow and tutor. His influence in the college was strong, and Ascham says of him that he "laid the very foundations of learning in that College." But he soon attracted attention in the university. He was appointed university Greek lecturer without a salary, but on the foundation of Regius Professorships in 1540 he was made Professor of Greek at a salary of 40s. a year. In 1544 he became Public Orator, in which office he was succeeded by Ascham, when in the same year he received a royal summons to undertake the tutorship of Prince Edward. On his departure Ascham regrets the withdrawal of "our most help and furtherance to learning." From this time, with the exception of a few years during the reign of Queen Mary, Cheke

Sir John Cheke (1514–1557).

enjoyed royal patronage. In 1549 he was appointed Provost of King's College, Cambridge, and in 1552 was knighted. During Mary's reign he was twice imprisoned in the Tower and compelled to return to the Roman Church. The shame of his recantation brought about his death in 1557. His services to the restoration of Greek were great. He not only turned the attention of his students to the best that the classical literature could offer, but contributed largely to save the pronunciation of Greek from the confusion and corruption into which it had fallen. Although his efforts in the direction of reform met with strong opposition from the Chancellor, the reformed pronunciation ultimately prevailed. Again on the testimony of Ascham, Cheke read Homer, Sophocles, Euripides, Herodotus, Thucydides, Xenophon, Isocrates, and Plato with his students. In addition to his interest in the restoration of Greek, Cheke directed his attention to the reform of English spelling and the purification of the English language of non-Saxon elements. For this purpose he translated the Gospel of St. Matthew into this reformed English. Although his writings were numerous and consisted mainly of translations from Greek into Latin, Cheke's most important work was the letters to the Bishop of Winchester on the Greek pronunciation controversy; *de pronuntiatione Graecae potissimum linguae disputationes cum Stephano Wintoni episcopo, septem contrariis epistolis comprehensae, magna quadam et elegantia et eruditione refertae.* (Basle, 1555.)

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CHEMISTRY. — As a University Subject; its History, Scope, and Status. — Probably no science possesses, in any two institutions of university rank, exactly the same scope and status, and none is therefore taught by any two men from exactly the same viewpoint or with exactly the same aims. In the case of chemistry, however, the innumerable applications of the science in industry, agriculture, medicine, pharmacy, and the like, introduce an unusual number of possibilities of variation. Hence, it follows that, aside from the art of chemical analysis which is common to all applications, there is much variability in the aspects of the subject which, in different institutions, receive the greatest emphasis. In discussing the place of the science in institutions of learning, it will simplify matters if we treat first the history, scope, and status of pure chemistry, and then take up the same aspects of the various branches of applied chemistry. In connection with the former, we shall consider, in succession, the organization of the instruction and the content of the chemical curriculum, adding some remarks on the development in each of these respects in different countries.

Pure Chemistry in the University. — The first courses in chemistry as a distinct subject of study were given to students of medicine and of pharmacy, and in the eighteenth century separate chairs of chemistry, established for the instruction of such students, became common. Students not of those classes could obtain a knowledge of the science from no other source. The teaching was, however, wholly by lectures. No laboratory work was offered, and even such slight practical knowledge of the science as lecture experiments afford was almost nowhere obtainable. Rouelle (1703–1770) was the first, and for long almost the only chemist who exhibited and explained the phenomena of chemistry, instead of merely describing them. Gay Lussac and Thénard continued the prac-

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81 5 " 2 528+8 52 7+ B+ " +3 9+!+ 9+ 859""4 " +59 "4".6 8 " 2 12! " 2 D+!C 8 6 8 8 2446" D+!8 6 !2 A !C B2 6 3++3 +59 524E59+B 8 !6 @28 "!B+!46 2 3+12! B+ " B"8 " 9+ D+!8 +8 7 @9+ 9+ 8+12!2 +859""48 " +59 "4".6 @+!+ +8 274 89+3 9+8+ 592 !8 @+!+ . D+ 1 9+ +59 524 859""48 5" B 14+ +3+12! B+ 8 " 1 !+ 28 @+44 28 " 2114 +3 59+B 8 !6 2!+ B2 C 2 +3 9+ "!B+!+ 7+ .+R 24 244 !+81+5 8 " 9"8+ 9+ D+!8 +8 +" 9+ B"8 B1"! 2 7!2 59+8 " 3 8 ! 24 59+B 8 !6 8 B+ 244 !. 524 59+B 8 !6 @9 59 3+248 @ 9 9+ +J !25 " 1!+12!2 " 2 3) 2114 52 " " B+ 248 81+5 24 8 73 D 8 " A "@ 28 B+ 244 ".!2196 2114 +8 1968 524 59+B 8 !6 " 9+ 8 36 " 244"68 2 3 B J !+8 4 A+ 8 ++4 9+!+ 7!2 59+8 52 " 46 7+ 2B+3 24 9" .9 2B .+ 9+B . D+8 4 4+ 3+2 " 9+ 426B2 " 9+ .!+2 +J + " 9+ +438 9+6 5"D+! " 9+ !+ 5"B B+!5 24 B1"! 2 5+ "!+ " 9+ 42!.+ 3!2 8 @9 59 9+ 8 36 " 9+B B2A+8 1" 1 !+ 59+B 8 !6 9+6 2!+ 8 59 28 9+ 59+B 8 !6 " +48 2 !24 @2 +!8 8"32 2 3 24A24 +8 8"21 2 3 74+259 .+ B2 +! 248 4 B+ 2 3 5+B+ .4288 2 3 1" +!6 1 .B+ 8 12 8 2 3 D2!C 89+8 81 ! 8 " 8 . B8 2 3 @2J+8 8 2!59 2 3 8 .2! 7!+@ . @ +EB2A . 2 3 3 8 44 . +J14"8 D+8 36+8 2 3 36+ . 121+! 4+2 9+! 2 3 .4 + 9+ B2 25 !+ " 9+8+ 8 7 8 2 5+8 !"B 9+ 1 !5928+ " 9+ !2@ B2 +! 248 "+ .+ " 9+ 89+3 1!"3 5 8 5" !"44+3 76 9+ 59+B 8 5" B1"8 +8 274 89B+ 8 4 A+ !2 4@268 2 3 125A . 9" 8+8 @9+!+ 8 114 +8 " D2! " 8 8"! 8 2!+ 8+3 9+ 59+B 8 2.2 5" !"48 9+ 1 !5928 .+ 76 85 + 5 81+5 52 " 8 +8 8 9+ B2 +! 248 !+ 5+ D+3 2 3 8 3 +8 9+ 8+8 "+ @9 59 9+6 2!+ 1 +! 2114 +8 "+ B+!274+ + 38 9+ 3 8 5 14 + 9+ 1! 5 14+8 2 3 25 8 @9 59 9+ 928 3+! D+3 !"B 9+ D+!8 6 "! +59 524 859""4 9+ B7+! 3 D+!8 6 2 3 B1"! 2 5+ " 9+ D2! " 8 3 D 8 " 8 " 59+B 8 !6 " @9 59 9+ 59 + 92D+ 7++ 7! + 46 592!25 +! I+3 8 2 +! 244 " 8 !1! 8 . 9+B 8 !6 3+248 @ 9 9+ 592 .+8 5"B1"8 " " 8 @9 59 52 8+ "! 255"B C 12 6 8 59 592 .+8 D+!6 " + " 9+ 1968 524 "! 2 !24 85 + 5+8 3+248 @ 9 8"B+ 281+5 " B2 +! "! 8"B+ 54288 " B2 +! 248 2 3 B 8 9+!+ "!+ 1!+8+ 2 "11"! 6 "! 32C B+ 24 59+B 524 @"!A 9+!+ 8 +D+ 2 59+B 8 !6 " 9+ 8 2!8 @9 59 8 +J1+! B+ 24 28 @+44 28 "78+!D2 " 24 92 @" 3+! 9+ 92 9+ D+!8 6 @9 4+ 9+ 5+ +! " 59+B 524 @"!A B26 4 + 9+ 3+12! B+ " 1 !+ 59+B 8 !6 9+ 85"1+ " 9+ 85 + 5+ 8 4 B +3 " 46 76 9+ +J !+B+ 7" 32! +8 " 244 9+ 3+12! B+ 8 " 85 + 5+ 1 !+ 2 3 2114 +3 @9 59 8 59 2 E 8 " +D+! 5493+8 9+B 8 !6 9+ 59""48 ? 9+B 8 !6 .2 +3 + !2 5+ " 9+ 8+5" 32!6 859""48 28 2 !2.B+ " 2 D+!6 84 .9 5" !8+ 1968 524 "! .+ +!24 85 + 5+ 9+ 1 !1"8+ " 9+ 5" !8+ @28 "!B2 " 24 8"4+46 9 9+ +8 274 89B+ " " B"3+! 28 3 8 5 !"B 54288 524 5 !! 5 42 59+B 8 !6 928 84"@46 .2 +3 .!+2 +! !+5". " 9+ !8 8+5" 32!6 859""4 " "1+ 2 427"!2C "!6 "! 3 D 3 24 @"!A " 9+ 1 1 48 @28 9+ 6 " " 3" 59""4 ! 44 $>=0G 9+ !8 " 9+ .4 89 74 5 59""48 " 2A+ 9 8 8 +1 @28 .76 2 " 48" $>&#G 9+ +3 2 +8 9+ !48 .9 2 3 "!B24 59""4 " "8 " $>&PG 4+3 9+ @26 9 8 B1"! 2 12! 5 42! 9+ 1!+8+ B+ 59+B 8 !6 8 2 .9 28 2 3 8 5 8 7-+5 @ 9 427"!2 "!6 @"!A 9+ B2-"! 6 " 9+ .4 89 74 5 59""48 +2!46 244 9+ 4"524 9 .9 859""48 " !+2 ! 2 2 3 244 9+ 42!.+! 9 .9 859""48 " 9+ +3 2 +8 9+ 2 B 8 " +259 +4+B+ 2!6 59+B 8 !6 28 @+44 28 " B2A+ 9+ 85 + 5+ 2 B+2 8 " .+ +!24 +3 52 " ++ + " 3 ! +) 4 +!B2 6 9+ +259 . " 85 + 5+ @28 !"3 5+3 " 859""48 "@2!3 9+ + 3 " 9+ 8 J ++ 9 5+ !6 @ 9 9+ ! 8+ " 9+ ; 7 @28 " !B46 +8 274 89+3 4 9+ 81!+23 " 9+ % :" "& 7+.2 5 + 5+ 9"@+D+! @28 2 .9 28 2 3 +!C + 2 +3 B288 5"D+! .+D+!6 7!2 59 @9 59 5"B+8 3+! 92 2B+ 9+B 8 !6 5" 43 " !+5+ D+ 8+12!2 +! !+2 B+ 9+ 859""48 8" 4" .+ 28 @28 A+1 9+ 725A.!" 3 2 9+ D+!8 +8 B1+ 8 " 9+ +259 . " 59+B 8 !6 9+ 9 .9+! 859""48 @28 . D+ 76 9+ 5!+28 .+ B1"! 2 5+ " 9+ 8 7-+5 3 8 !6 $>QQ 59+B 8 !6 @28 !"3 5+3 3+ +46 9+ !+"!.2 I+3 ; % % +!4 9+ 8 7-+5 3 3 " 7+5"B+ .+ +!2446 +8 274 89+3 244 9+ 8+5" 32!6 859""48 4 9+ .) $>>Q @28 1288+3 9+ !+24 8 5 + 3+ 56 @28 ! 9+!5" !B+3 76 9+ .) $><Q !+ "!5+3 76 9+ 3+5!++ " 9+ 2 8+! 88 +3 <## 9+ "44"@ . B7+!8 " 1+! "38 2!+ . D+ " 2 !24 85 + 5+ 9+ 3 +!+ 61+8 " 859""48 " 3+ +288 . B+ 8 B23+ " 59+B 8 !6 @ 9 9+ +J5+1 " " 92 9+!+ B+ " +3 9+ .6B 28 B @" 9" !8 2 @++A 2!+ . D+ F 9+ !8 P 6+2!8 = 9+ 8 J 9 2 3 & 9+ 428 ;+ 6+2!8 9+ !+24E859""48 Q 9" !8 2 @++A "!+ 9+ !8 = 6+2!8 = 9+ 9 2 3 & +259 " 9+ !+B2 .+ 6+2!8 2!+ 244" +3 " 2 !24 85 + 5+ 9+ .6B 28 B 59+B 8 !6 8 8 44 54 3+3 9+ .+ +!24 8 7 -+5 " 2 !24 85 + 5+ 9+ !+24E859""48 " 9+ 9!++ 3 +!+ 61+8 9+ 8 7-+5 7+5"B+8 3 +!+ 2 +3 ' ;) 2 3 8 9+ 2 .9 "!+ Q 9" !8 2 @++A 3 D 3 24 427"!2 "!6 @"!A 8 !+R + 46 3" + 7 B2 6 859""48 92D+ " 427"!2 "! +8 2 3 8"B+ 3" " 8+ 9"8+ @9 59 9+6 92D+ 9+ 85 + 5+ 8 2 .9 244 859""48 9+ 54288!""B 7 " "!+ 8 "@ 82A+ 8" B 59 28 "!+ 5244 ." 9+ 1"@+!8 " "78+!D2 " 2 3 " !+28" ." 9+ 1 1 48 2 3 "!+ +259 .+J25 +J1!+88 " D+ @9+!+ 427"!2 "!6 @"!A 8 " +!+3 9+ +J1+! B+ 8 2!+ !+1+ " 8 " 9"8+ 89"@ 9+ 54288!""B

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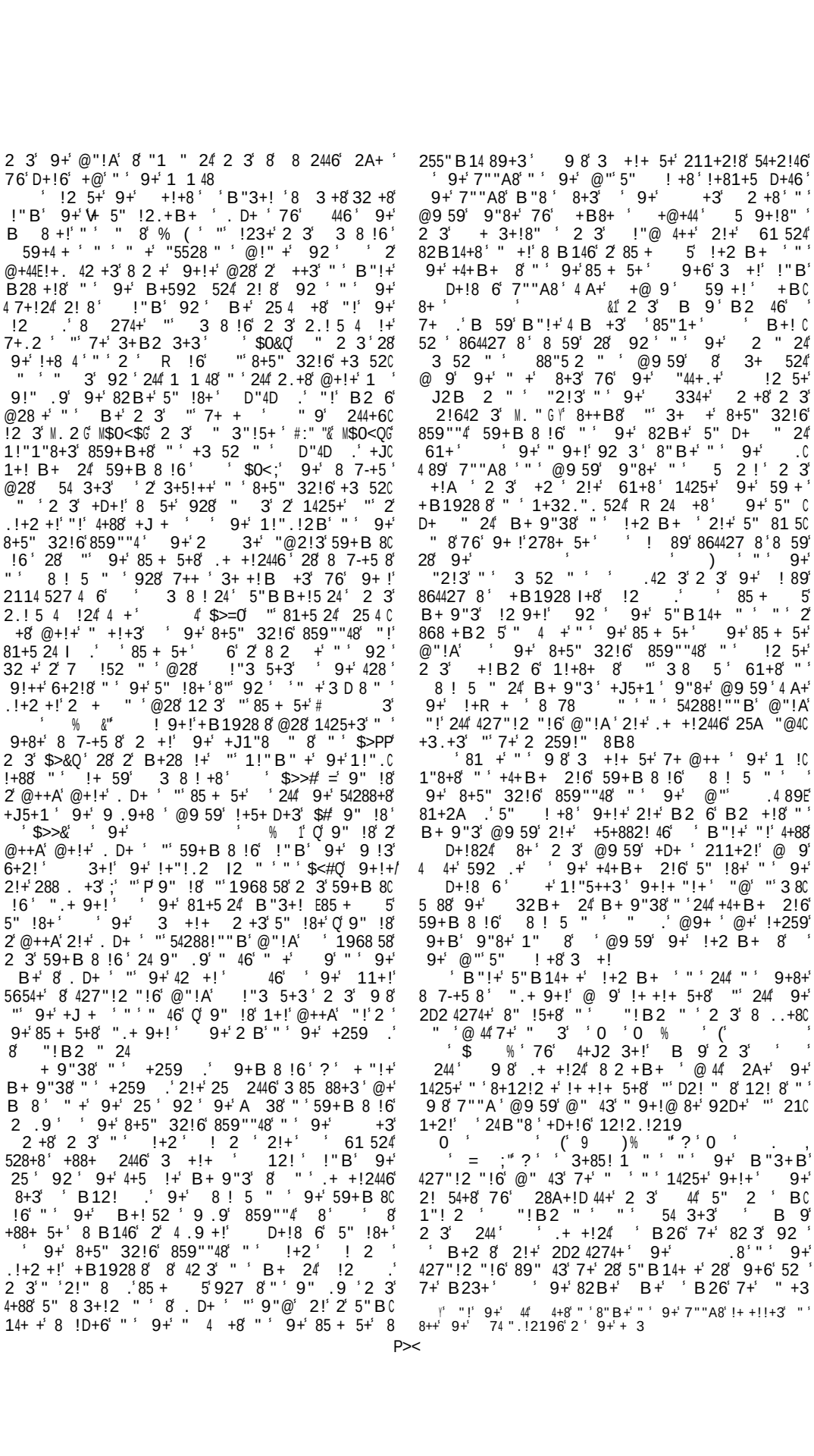

92 2 B2. 5+ 427"!2 "!6 3"+8 " +5+8E !2! 46 1!"D+ 92 +D+ 1288274+ 8 ! 5 " 8 7+ .+ . D+ 2 8 25 "!6 @"!A 52 7+ 3" + @ 9 8 B14+ 2114 2 5+8! 2 3 8 B14+ .8 9+ 5"B14+ + +88 " 9+ +R 1B+ " 9+ 427"!2 "!6 2 +5 8 9+ R 2 6 " @"!A @9 59 52 7+ 3" + 76 2 8 3+ H 2 . D+ B+ 7 " 2 6 9 .+ 4 A+ 9+ 82B+ 3+.!++ 9+ R 24 6 9+ 3 81+ 8274+ 9 .8 2!+ @2 +! 2 3 .28 "!+ 8"B+ 8 78 + "!+ 9+ 42 +! 2 3 2 8 5 + 2B" " " 2112!2 8 "+ 274+ C 8 ! 5 D+ +J1+! B+ 8 "+ 7+ 3" + 248" B1"! 2 92 868 +B 2 3 "!3+!+ 89" 43 1!+D2 4 9+ B +8 3+ 2 48 " +D+!6 9 .+ 5" C +5 +3 @ 9 9+ 427"!2 "!6 B2 +! 248 2 3 21C 14 2 5+8

9+ 427"!2 "!6 ! 89+8 9+ 728 8 "!+ 244 9+ !+24 A "@4+3.+ " 59+B 8 !6 @9 59 9+ 1 1 4 25R !+8 8 9+!+ " 46 92 9+ 5"B+8 B B+3 2 + 5" 25 @ 9 9+ 8 7-+5 9+ @9"4+ 5" !8+ 8 8"+ 2!!2 .+3 !+42 " "+ 9+ 427"!2 "!6 @"!A 92 9+ " 9+!+ B+2 8 " C 8 ! 5 " 2!+ 8 78 3 2) "+ 2 3 211+2! !+42 " "+ 9+ 4 .9 " 8 7"!3 2 + 2 3 8 114+B+ 2!6 2.+ 5 +8 9 8 9+ 3 85 8C 8 " 8 9+ 54288!""B +!1!+ 9+ 1+!8" 24 "78+!D2 " 8F 9+ +J1+! B+ 24 3+B" 8 !2 " 8 2!+ +J + 8 " 8 " 9+B F 2 3 9+ !+23 . 9+ 7""A 8 8 B146 "!+ 9+ 2B14 52 " " 9+ A "@4+3.+ @9 59 9+ 427"!2 "!6 @"!A ! 89+8 9"8+ 25 8 2 3 5" 5+1 " 8 @9 59 2!+ " 3+! D+3 3 !+5 46 !"B 9+ 427"!2 "!6 @"!A ? 2 3 9+6 2!+ B2 6 ? +D+! 9+4+88 3+1+ 3 "!+ 9+ !+ 44 211!+9+ 8 " 2 3 "!+ 9+ 1"88+88 " " 4 + 2 3 !+24 6 " 9+ 25 92 9+6 2!+ 89"@ " "+ 7+ B23+ 1 " +2 !+8 + 5" +!+3 D2! " 8 25 24 +J1+! B+ 8 !+24 A "@4C +3.+ 59+B 8 !6 8 + 9+!+ "7 2 +3 76 +J1+! C B+ "!+ 76 9+ 2114 52 " " +J1+! B+ 24 A "@4+3.+ 9!" .9 9+ 8+ " 9+ B2. 2 "

92 9+ 427"!2 "!6 @"!A B26 !+ 2 9 8 3"B 2 1"8 " 9+ 868 +B " 8 ! 5 " V B 8 7+ 23+R 2 + 85"1+F B 8 2B146 44 8 !2 + 9+ 25 8 27" +259 +4+B+ 2 3 5"B1" 3 " 3 9+ 864427 8F B 8 5" C 2 +J2B14+8 " 244 9+ 54288+8 " 25 8 @9 59 2!+ "+ 7+ !+1!+8+ +3 9+ 5" !8+F 2 3 B 8 3+24 @ 9 +D+!6 B1"! 2 1! 5 14+ "!+ 42@ 4 A+ B2 +! 8 9 8 428 !+81+5 92 B"8 427"!2 "!6 " 4 +8 2!+ " 2746 3+ C 5 + + 9+ 42@8 2 3 1! 5 14+8 7+ ." " 2 B"!+ "!+ 4+88 278 !25 2 !+ 3+B2 3 44 8 !2C " B"!+ !.+ 46 92 3 "+ 9+ 8 .4+ 25 8 9+ R 2 2 D+ 42@8 " 59+B 524 5"B1"8 " "+ 9+ 3 85 88 " " @9 59 8"+ B 59 B+ 8 2114 +3 2 3 9+ 8+ " @9 59 28 9+6 +J1!+88 9+B8+4D+8 "!B 42 2 3 +R 2 " 8 8"+ 5" C 8 2 2!+ "" " + . "!+3 2 2 D+ +J1+! B+ 8 2 3 9+ 1!"1+!+ 4 I2 " " " 9+ 32 2 @9 59 9+6 . D+ 2!+ 3 81+ 8274+ 12! 8 " 9+ 427"!2 "!6 @"!A

9+ 3 !+5 " 8 "!+ 427"!2 "!6 @"!A 89" 43 7+ 8"+ 8 B14+ 54+2! 2 3 44 92 9+ +J1+! C B+ 8 52 7+ 3" + @ 9 9+ B B B" " 3 C D 3 24 8 1+!D 8 " 9+ "7-+5 " " 9+ +J1+! C B+ 9+ 2112!2 8 9+ A 3 2 3 R 2 6 " 9+ B2 +! 248 2 3 9+ B+ 9"3 " B2 1 42 " 89" 43 7+ 54+2!46 +J142 +3 9 8 12! " 9+ 3 !+5 " 8 8 B1"! 2 "!3+!+ 92 @+ B26 7+ 5+! 2 92 +259 8+12!2 + 1 1 4 928 7+ "!+ 9 B +J25 46 9+ 3+8 !+3 19+ "B+ " _ +8C " B2!A8 89" 43 5244 2 + " "+ 9+ B2 +!8 "+ 7+ "78+!D+3 2 3 3 !+5 R +8 " 8 5244 ." "!+ !+ 4+5 " 89" 43 7+ 28A+3 9+ R +8 " 8 89" 43 7+ " @"+ A 38 @9 59 89" 43 7+ 52!+C 446 3 8 . 89+3 + 54288 54 3+8 R +8C " 8 9+ 2 8@+!8 "+ @9 59 2!+ "7 2 274+ 76 "78+!D2 " 2 3 !+28" .24" + 9+ 2 8@+!8 "+ 9+ " 9+!+ 54288 " R +8 " 8 @ 44 !+R !+ !+ +!+ 5+ "+ 9+ 7""A "!+ 8"B+ " 9+!+ 8" !5+ " "!B2 " 28 @+44 9+ 1 1 4 !+R !+8 "+ 7+ " +3 @9 59 8"!+ " R +8 " 9+ 8 92 34 ." "!3+!+ 92 9+ B26 " " " 9+ " + 92 3 8+ 9+ 7""A @9+ 9+ 89" 43 7+ +B14"6 .9 8 "@ +6+8 "!+ 9+23 "!+ " " 9+ " 9+!+ 92 3 + C 3+2D"!+ "+ 2 8@+!+ !"B 9 8 "@ "78+!D2 " 8 8 114+B+ +3 76 2 4 4+ 81+5 42 " 2 R +8C " @9 59 52448 "!+ 25 24 "!B2 " 92 9+ 8 " 2 1"8 " "+ 8 1146

9+ 427"!2 "!6 @"!A 89" 43 7+ 2 +44+5C 24 "55 12 " D+!6 3+D 5+ B 8 7+ 8+3 "!3+!+ "+ B2A+ B1"88 74+ "!+ 9+ 1 1 4 "+ ++4 92 9+ 928 82 8 +3 9+ !+R !+B+ 8 " 9+ 5" !8+ 76 9+ B+!+ 1+! "!B2 5+ " 5+! 2 B+592 524 "1+!2 " 8 9+ " 4 + 2 3 9+ 8 78+R + !+2 B+ " 9+ +J1+! B+ 24 !+C 8 4 8 76 9+ 8 ! 5 "!+ 89" 43 3+B2 3 9+ 8+ " +44 .+ 5+ 2 3 89" 43 288 8 8 5 4 D2C " 9 8 5" +5 " 9+ 61+ " 427"!2C "!6 @"!A 1!+D2 4 !+2 ! 2 928 2 .!+2 23D2 2.+ "D+!+ 92 5"B B" 46 +B14"6+3 9+ +3 2 +8 9+ "!B+! 528+ 9+ 1 1 4 52 " 9+41 ++4 .+ 92 9+ 8 @!+8 4 .+ @ 9 2 1!"74+B 2 3 B28 +! .+ 8 +1 76 8 +1 +5"D+!8 2 8B244+! B7+! " "1 58 7 9 8 +J1+! + 5+ @ 9 +259 8 B"8 5" 81 5 " 846 2 +44+5 24 + "! B2 6 ! 89 859""48 9+ 8"E5244+3 9+ ! 8 5 B+ 9"3 #" "& 8 +B14"6+3 "+ 2 42!.+ +J + 9 8 B+ 9"3 928 7++ 1425+3 1!"B + 46 7+ "!+ 9+ +259+!8 2 3 928 7++ @ 3+46 !"3 5+3 B2 46 9!" .9 9+ 4 + 5+ " !" +88"!+ !B8 !" .+ 9+ 1! 5 14+ 8 92 " D+8 .2 " @ 9 9+ + 5" !2.+B+ 2 3 23D 5+ " 9+ +259+!+ 9+ @9"4+ 7+ .+ 5" 3 5 +3 8 59 2 @26 92 9+ 1 1 4 8 28 2!+ 28 1"88 74+ 9+43 !+81" 8 74+ "!+ 3+ .+ 9+ 1!"74+B 2 +259 8 +1 2 3 "!+ 3+D 8C .+ B+2 8 " 8"93 .+ 6 9 8 B+2 8 4+88 .!" 3 8 5"D+!+3 2 . D+ B+ 92 76 9+ 5" D+ " 24 B+ 9"3 7 +!+8 2 3 + 9 C 8 28B 2!+ B"!+ +28 46 2!" 8+3 2 3 +3 52 " 24 + 38 28 3 8 5 !"B "!B2 " 24 + 38 2!+ 7+ +!+ 8+!D+3

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7 2) " ? B" .' 9+ 1!"74+B8 @9 59 +259+!8 " 59+B 8 !6 @9+ 9+6 B++ 2!+ 1!" +" 3 85 88 8 92 2!+ 9+ S +88+ C 248 " +4+B+ 2!6 59+B 8 !6T Z "B+ B+8 9 8 B 59E8" .9 + 6 8 3+8 . 2 +3 9+ S B B B 5" + T " 2 +4+B+ 2!6 5" !8+ 9+ !+81" 8+ " 9+ !+2 ++3 @9 59 3+!4 +8 9 8 R +8 " 8 8" .9 9+ @!" .' 3 !+5 " 8 2446 2 864427 8 5" 2 .' 9+ 2B+8 " 2 B7+!" " 59+B 524 8 78 2 5+8 9+ 4+8 " 8+D+!24 59+B 524 42@8 2 3 59+B 524 9+"! +8 @ 9 2 D+!6 +@ 5"B B+ 8 8 244 92 8 " +!+3 2 8@+! " 9+ 3+B2 3 59 2 52 24". +3"+8 " !+2446 2 8@+! 9+ R +8 " 2 244 "! +J2B14+ 7!"B + B26 211+2! 9+ 4 8 " +4+B+ 8 7 9+ R +8 " 8 44 !+B2 8 @9+ 9+! 9 8 +B 9+!+R !+B+ 8 82 8 +3 9+ +4+B+ 7!"B + 8 8 B146 2B+3 76 9+ +259+! 28 " + 9+! B+B7+!8 " 9+ 924"C .+ 2B 46 " 9+! +259+! B26 ++4 92 8 +J1+5 +3 92 9 8 +4+B+ @ 44 7+ 8 3 +3 28 B 59 3+ 2 4 28 8 594"! + ! 2.2 9+! B"59+B 8 !6 B26 7+ 81+5 +3 7 9+ @! +! " 9+ 864427 8 B26 " 92D+ + 3+3 2 6 3+ 2 4+3 3 85 88 " " 9 8 8 7-+5 7 92D+ 2 B+3 8 B146 " 3 52 + 92 2 8"B+ 8 2.+ 2 + " 89" 43 7+ 5244+3 " 9+ 25 92 5+! 2 59+B 524 25 " 8 9+2 8 +D"4D+3 D+ @9+ 9+ 864427 8 928 7++ +J12 3+3 " 9+ 8 I+ " 2 +J 7""A 28 928 24!+236 7++ 3" + 76 2 D+!6 42!.+ B7+! " 2 9"!8 9+ 1!"74+B 8++B8 8 44 " !+B2 D 3+ 46 9+ 1!"74+B !+ +!8 2 4+28 12! " 8"B+ 9 . @9 59 8 " 5" 2 +3 +D+ " 9+ +J 7""A 2 3 B 8 7+ 8" .9 7+ @++ 9+ 4 +8 2 3 9+ B+ 9"38 @9 59 9+ 8 7-+5 8 92 34+3 9+ 54288!"" B 4 8 " "1 58 +448 4 4+ 4+88 @+ 52 8"B+ !26 3+ + 9+ 2 B8 @9 59 2!+ " 7+ A+1 D +@ 9+ 8 ! 5 " 2 3 3+85! 7+ 9+ D +@1" " 9+ +259+! @9" 92 34+8 9+ B2 +! " 4 +3 9+ 864427 8 "B+ 2 +B1 B 8 9+!+ "!+ "@ 7+ B23+ " 3+ + 24" .' 9+8+ 4 +8 9+ B"3+8 " 92 3C 4 .' 9+ 5" +

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2!+ "+ 7+ 8+3 8 2 .244 25 8 M;G 6C
1" 9+8+8 2!+ "+ 7+ 8+3 " 46 +J142 .2 3
!+42 .25 8 2 3 2!+ "+ 7+ +4 B 2 +3 !"B
9+ 24 8 2 +B+
++34+88 "+ 826 9+ 1" " D +@ 8 "
8"B+ 9 .+ 7+ +J142 +3 "+ 9+ 1 1 4 7
8"B+ 9 .92 8 "+ 7+ 8+3 76 9+ +259+!
"+ 8 36 " !"@ D +@1" 2 3 5"!!+5
8 2 3 5 4 B2 +! "!@+ 2!+ " +D+ 5" C
85 " 8 92 @+ 92D+ 2 D +@1" 4 8 3C
3+ 46 89 8 8"B+ B1"! 2 12! 5 42!
9+ +259+!+ B 8 .!23 2446 !+24 I+ 2 3 23- 8
9 8 "@ D +@1" 9+ D +@1" 8 8"B+E
9 .+ "7 2 274+ 3 !+5 46 !"B 7""A8 "!
8 9+!+ 5" 2 +3 B14 5 46 2 3 " +JC
14 5 46 8 3+ 2 48 8 2 3 D 3 24 1"8C
8+88 " " +259 59+B 8 + 52 "78+!D+ 8
B1"! 2 5+ 7+8 76 B2. .9+ D +@1"
"+ 7+ + !+46 !+B"D+3 5" !8+ 59+B 8 !6
278"4 +46 @ 9" 2 D +@1" @" 43 +D C
3+ 46 7+ 2 @9"446 8 ! 5 D+ 592"8
0 (,
"? 4 9" .9 9+ +3 2 +8 9+ 2 B8
" 9+ 9 .9 859""4 2 3 D+!8 6 5" !8+8 2!+
24B"8 3+ 524 9 8 8 3 + 244 1!"727 4 6
" 8" B 59 "+ 9+ 2 B" 8 2 3 5" 85 " 8
3+5 8 " 92 9+ 5" !8+8 89" 43 7+ 3+ 524
28 "+ 9+ 25 92 9+ +259+!8 2!+ !2 +3
9+ D+!8 6 2 3 +259 B"8 +28 46 @92
9+6 9+B8+4D+8 @+!+ 2 .9 9+"!6 9+
@" 5" !8+8 B .9 7+ 3 +!+ 9+ 2 !+
" 9+ 8+5" 32!6 859""4 5" !8+ 89" 43 3+1+ 3
8"4+46 " 1+32.". 524 1!25 524 5" 8 3+!2 " 8F
9+ 2 !+ " 9+ D+!8 6 5" !8+ 8 42!.+46
1!+3+ +!B +3 76 9+ 25 92 B2 6 " 9+
.!23 2 +8 " 9+ D+!8 6 7+5"B+ +259+!8 "
59+B 8 !6 "! ." " B+3 5 + "! + . ++! .
+ 9+!+ " 9"8+ 9!++ 528+8 9+ +4+B+ 2!6
5" !8+ 8 "44"@+3 + 9+!+ 76 B"!+ 23D2 5+3
5" !8+8 59+B 8 !6 "! 76 5" !8+8 1968 "4C
".6 1968 "4". 524 59+B 8 !6 .+"4".6 2 3" 9+!
85 + 5+8 "! 76 .7" 9 A 38 244 "
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2 A "@4+3.+ " 59+B 8 !6 " 9+ 5" D+ " 24
3+85! 1 " 5" !8+ @9 59 928 "! 8 B2
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" 9+8+ B+ 9"38 2!+ 8 55+88 4 "1+!2 " 9
9+ +@ 8 " 8 @9 59 9+6 92D+ 7++
! +3
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9+ ! B7+! 2 3 !2 9+! 8 24 B"3+8 "
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5" !8+ A "@ 28 "!.2 5 59+B 8 !6 9+
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7++ !"3 5+3 "! 9+ 285+! 2 B+ 25 8
2 3 "! 9+ +4 5 32 " 59+B 524 19+ "B+ 2
2!+ 1!25 5+3 2 3 9+ ! 2114 52 " 8 2!+ 3+C
85! 7+3 81+5 24 5" !8+8 1968 524 59+B 8 !6
2446 5+! 2 8 2 5+8 2 2 +B1 928
7++ B23+ "! +24 I+ 9+ 427"!2 "!6 "8"B+
+J + 9+ 5" 3 " 8 " B2 25 ! .59+B 8E

!6' ' 2 59' 2' 5" !8+' 9+' 1 1 4' 92 34+8' 42!.+!' B288+8' "' B2 +! 24' 5" 8 3+!8' 9+' 5"8' "' 9+' "! . 24 8 78 2 5+8' 9+' +J1+ 8+' "' +259' "1+!2 "' 2 3' 9+' 6 +43' +' 5" 8 3+!8' 248'" 9+' 1 !1"8+8' "!' @9 59' 9+' 1!"3 5' 8' +B14"6+3' ' 5"B B+!5+' 2 3' +8 8' 8' R 24 6' 76' R 2 C 2 D+' B+ 9"38' ' "!3+!' "' 4+2! ' !"B' 1!25 524' +J1+! + 5+' @92' A 3' 2 3' 2B" ' "' B1 ! C +8' 2!+' 1+! B 88 74+' ' +259' 8 2 5+' ' 5" !8+' "' 9 8' A 3' 8' "' ' 2 6' 8+ 8+' 2' 8 78 +' "!' 1!25 524' +J1+! + 5+' ' 2' 59+B 524' 3 8 !6' 7 ' B26' 142 8 746' 7+' 8 11"8+3' "' 3 B 89' 9+' 2@A@2!3 +88' "' 9+' B2 ' "' 2523+B 5' !2 .' @9+ ' 9+' 8 33+ 46' 288 B+8' 9+' 1"8 "' "' 59+B 8' ' 2' 25 "!6'

+ +!+ 5+80 ?)

% %' ') ' (' ‹ ?

) ' /)' ' 2!46' 8 "!6'2 3' !+8+ ' " 3 " 8' "' 9+' +259 .'"' 9+B 8 !6' ' 9+' +3 524' 59""48' "' 9+' +3' 2 +8' '% % 1' ' ("4'$='1';&#' . . 7) ' , ' ' / ' 9+' "3+B' 68 +B'" ' +259 .' !25 524' "!.2 5' 9+B 8 !6'2 3' 8' +D+4"1B+ ' - ' % ' 1' $<##F) 1' &Q'1'=0&' (' . . ') " ' / ' (' " M " 3" ' 2 3' +@' "!A' $<#& G 9 8' @"!A' 5" 2B8' !+ +!C + 5+8' "' " 9+!' 8" !5+8' " ' "!B2 "

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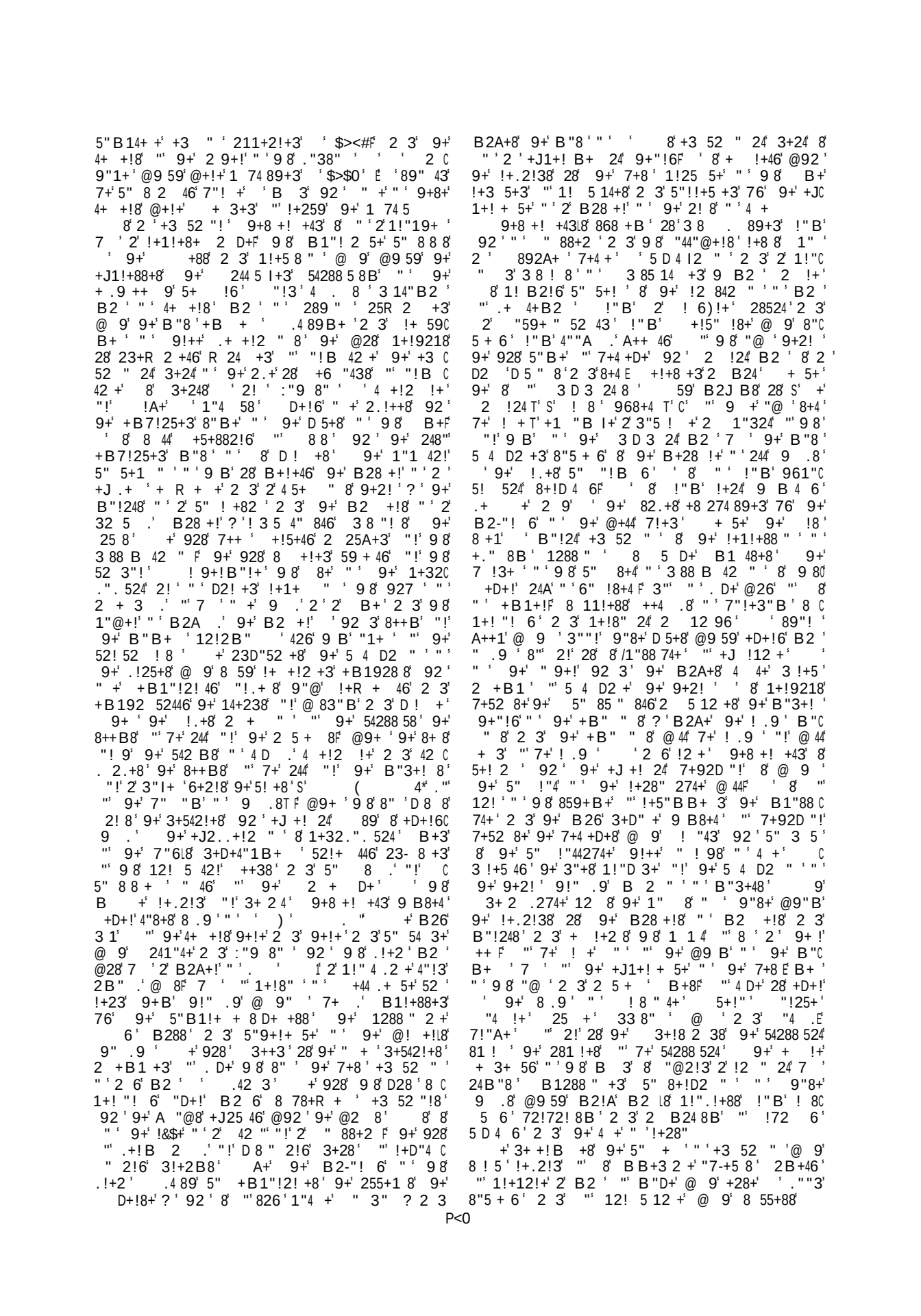
" ' - ! . & ' 9+' + "!B' ' +5" 32!6' 3 C 52 " ' ' !2 5+') ' !1' ("4'QP'M$<#;G' 1 ' $;# - ! . ' ')% ' 9)% " ' % " M 2! 8' $>>< G < " ' ' + ') % ' % ! 1' ("4' ' M +!4 ' $<#= G $ ') ' ' $ ' ' ' % , " M 2! 8 G % * " " & & ' : ' ' 7 ' / ' '% " M +@' "!A' $>>< G ++' 248'" 74 ".!2196' " ' 9+B 8 !6' + 9"38' " ' +259 .

' ('0 % ' ‹ ?

& &) ' ' ' +1"!' " ' 27"!2 "!6' " 8 ! 5 " '% ' '% % 1' $<#;' 1 ' =0$ ' ") ') ' ' 0 ' 0 % ' (' '% (% ' ' ' ' $ ' ')% " M " 3" ' 2 3' +@' "!A' $<#; G ! " 7 1 & & . ' ! & " ' "B+' ! 5 14+8' ' 27"!2C "!6' " 8 B5 " ' '% % 1' ("4' Q>' M$<#>G' 1 ' &&P !)) ' !)) ' . ' + ') ! % (' BA ' %)(' 3 ; %) % 7) " M 2 C "D+!' ' + 1I . ' $<#0 G + % 1' @ 9') '(' '% % ' ' " M " 3" ' 88 +3' 2 2446' 76' 9+' "2!3' " ' 3 52C " G 9+' ' .) ' (' ' B26' 7+' 923' 8+12!2 +46 - & & ' ' ' ..+8 " 8' "!' 9+' " 8 ! 5 " ' " ' 9+B 524' 27"!2 "! +8' '% % 1' ("4' ;#' M$<#<G' 1 ' P=> + ! ' ' 0 ' ' 9)% ' ' " M " C 3" ' 2 3' +@' "!A' $<#Q G 7)' 2 3' !) ' ' 9)% ' ' ' ') ' (" M " 3" ' 2 3' +@' "!A' $><& G +1"!' " ' 9+'8 75"B B ++' " ' 59+B 8 !6' " ' 9+' "BC B ++' " ' "44+.+' !2 5+' +R !+B+ 8' " ' 9+' 2 " 24 3 52 " 24 88"5 2 " ' ' (' " " "1' $><<' 11' Q&' 2 3' $&P % * 3 ') " ' ' !+8 3+ 24' 33!+88' 8+5C " ' " ' 2 9+B2 58' 2 3' 968 58' " ' 9+' ! 89' 88"5 2 " ' M$<#<G' :(" !+' ("4'>$'1'QP0' '% % 1' ' ("4';#' 1' Q>< 0 ' & < !) ' "B B+ ' " ' S' " 9+!' " ' " ' (+@ T' '% ' '% % ' ' % 1' $<#0' : +

0 ' ' & < !) ' 9+' ! 5 42 " ' " ' 59""4' 2 3' "44+.+' "!A' ' 9+' 5 + 5+8' 0 ' '% ' ! 1' ("4' 0' 11' =$$' =P;' PQ0 9+' J1+! B+ 24' (+@' " ' ' 9+B 8 !6' '% ' '% % ' ' % % 1' $<#>' 5 "7+! 9+' " ' " ' (+@' ' 9+B 8 !6' '% ' '% % ' ' % 1' $<#0' +7! 2!6 9+' 1 4' + "!+' 2 3' +!' 2A .' 9+B 8 !6' '% ' '% % 1' $<#;' 5 "7+! 9+' +927 4 2 " ' (9+' B+! 52 ' "44+.+' 2 3' 9+' 425+' " ' 9+B 8 !6' ' ' '% % 1' ("4' ;# M$<#<G' 1' =P0 2 3' !&& ' ( ) ' ' 0 ' 0 % ' (' ' $ % " M " 3" ' 2 3' +@' "!A' $<#Q G

' ? ' 9 4 1' "!B+!' 2 9"1+' " ! 9' 2!4" ' 9+8 +! +43' @28' 7"! ' " 3" ' +1 ' QQ' $&<=' +.4+5 +3' 76' 9 8' 2 9+!' 9+' 9 !3' 2!4' 9+' @28' +3 52 +3' 3+!' 9+' 3 !+5 " ' " ' 9 8' B2 +! 24' .!2 3B" 9+!' 9+' 2!59 " +88' " ' 24 2J' +' 923' B28 +!+3' !+ 59' 2 ' $>' @ 9' 9+' 2 3' " ' 2' "!+ . ' "!' 2 3' ' 0=' 9+' 4+ ' 2B7! 3.+' 2 +!' 2' 6+2!!8' 8 26' 5" D 5+3' 92' C' 9+' 54288 58' 5" 2 +3' +D+!6 9 .' 92' @28' + 9+!' +5+882!6' 8+ 4' "!' "! 2B+ 24' "' B+ T' +' @28' 8"" ' 3 8C 27 8+3' " ' 9 8' " " ' 76' 2' " !' ' 42 3+!8' @9+!+' 9+' @28' !"3 5+3' "' 9+' 7+8' 8"5 + 6' 2 3' 4+2! +3' 9+' 2! 8' " ' 9+' 1"4 +' @"!43' +C 5244+3' "' .42 3' 2' 9+' 3+2 9' " ' ++ ' +' 9+' @28' 211" +3' ' 0P' .+ 4+B2 ' " ' 9+' 7+3C 592B7+!' "' 9+' ! 5+' " ' 24+8' ' 9+' 82B+' 6+2!' 9+' B23+' 9 8' !8' 81++59' ' 9+' " 8+' " ' "B B" 8' "!' 8"B+' 6+2!8' 9 8' 1"4 524' 25 D 6' @28' !+8 ! 5 +3' 76' 9+' ! 5 " ' 7+ @++ ' 9+' ! 5+' 2 3' 9+' .' +' +B14"6+3' 9 8' 4+ 8 !+' 1!+ 6' .2646' ' 5"B12 6' @ 9' 9+' 7+8' @ 8' " ' 9+' 326' B23+' ! + 38' " ' 33 8" ' "1+' !7 9 " ' 2 3' @ ' 2 3' - 3 5 " 846' 5" ! +3' 9+' ! 5+!8 B 8 !+88' ' 9 8' 2 9+!!8 3+2 9' ' $0Q&' 9+' ""A' 9 8' 8+2' ' 9+' " 8+' " ' "!38' 2 3' 8"" ' 2 +!' 9+' 255+88 " ' " ' +"!.+' 9+' @28' 211" +3' 2B728823"!' 2 ' 9+' 2. +' ! .' 9 8' 1+! "3' 9+' "!B+3' 2' .2442 ' 244 2 5+' @ 9' 2' 4+' 3 ' " 59+ ' @9"' ' $0;Q' 1!+C 8+ +3' 9 B' @ 9' 2' 2 !24' 8" ' ' $0;;' "!' 9+' 82A+' " ' B" +6' 2 3' 4 + 5+' 9+' B2!! +3' +4 8 2' D" ' 3+!' 59 4+ 7 !.' 2 !24' 32 .9C +!' " ' +"!.+' ' 9+' " 8+' " ' "!38' 9+' 3 8 . 89+3' 9 B8+4' 76' 2' 7! 44 2 ' "11"8 " ' "' 9+' ."D+! B+ ' " ' !' "7+! ' 241"4+' 2 3' 9 8' 12!' @28' 5" 8 3+!274+' ' 9+' 3"@ 244' " ' 92' B 8 +!' ' $0=Q' 8 3+' !"B' 9 8' D2! " 8' B1"! 2 ' 3 14"B2 5' B 88 " 8' 9 8' B"8' 5" C 81 5 " 8' 1"4 524' 8+!D 5+8' @+!+' 1+! "!B+3' 28' (5+!"6' ' !+42 3' ' $0=P' 2 3' 28' +5!+ 2!6' " ' 2 +' !"B' $0=&' "' $0=>' +' !+8 . +3' ' $0=>' 2 3' "' 9 8' 3+2 9' ' $00;' !+B2 +3' ' 1!25 524' !+ !+B+ ' !"B' 1 74 5' 4 +' +2 C +88' 3!"D+' 9 B' B"!+' 2 3' B"!+' 1" ' 9 8' "@ ' !+8" !5+8' +' 81+ ' 9 8' 428' QP' 6+2!8' 42!.+46' ' !+23 .' 2 3' @! .' 2 3' ' 2 + 3 .' "' 9+' +3 52 " ' " ' 9 8' 2 !24' 8" ' 2 3' 9 8' ."38" ' @9"' 9+! +3' 9 8' 4+ 9+' 1! 5 124' B2 +! 248' "!' 9+' 8 36' " ' 9 8' 3+28' " ' +3 52 " ' 2!+0' 9+' 4+ +!8' "' 9 8' 8" ' !8' 1 74 89+3' ' $00=' 76' 9+' 8" L8' @ 3"@F 9+' 4+ +!8' "' 9 8' ."38" ' " ' @9 59' 9+' !8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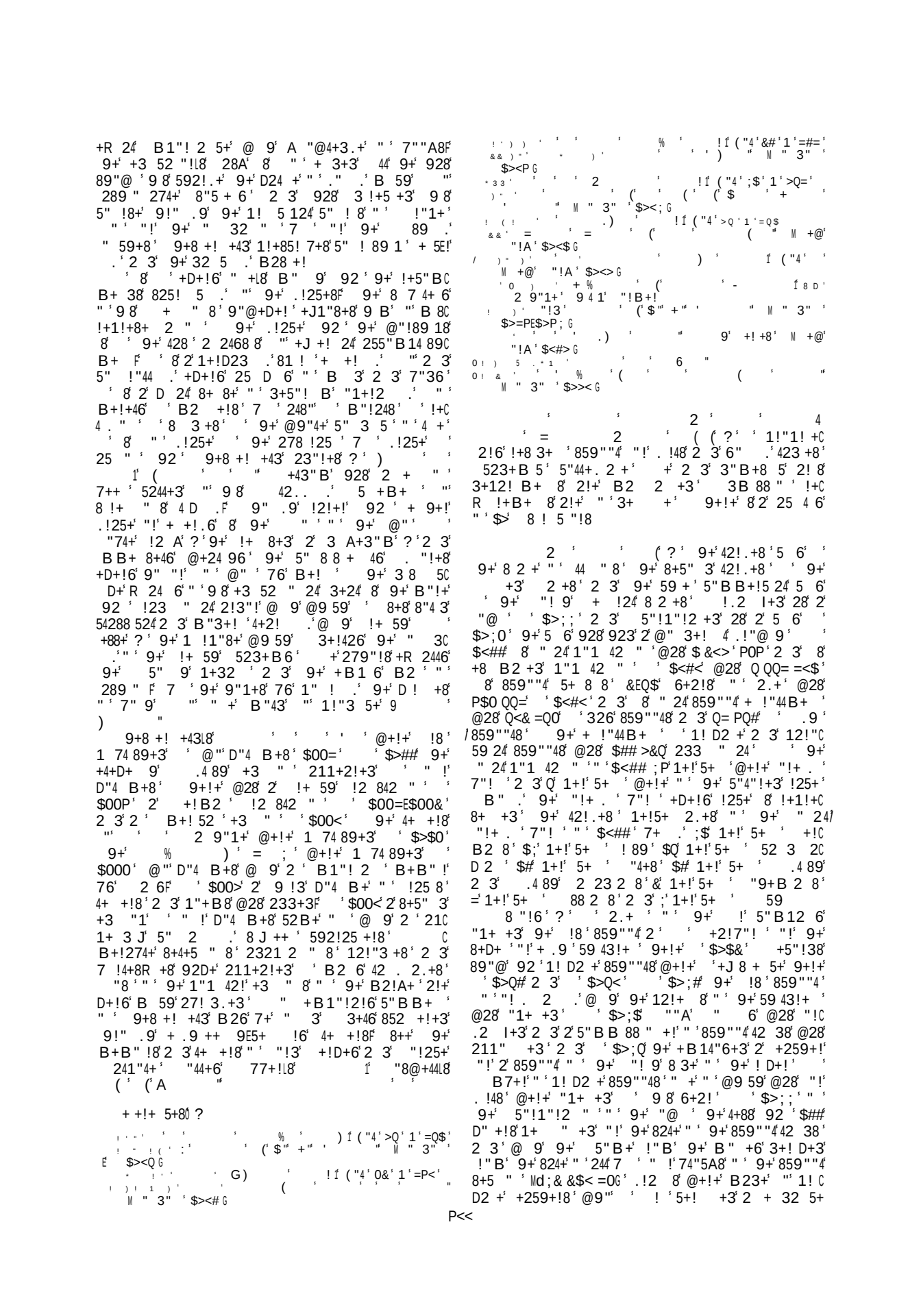

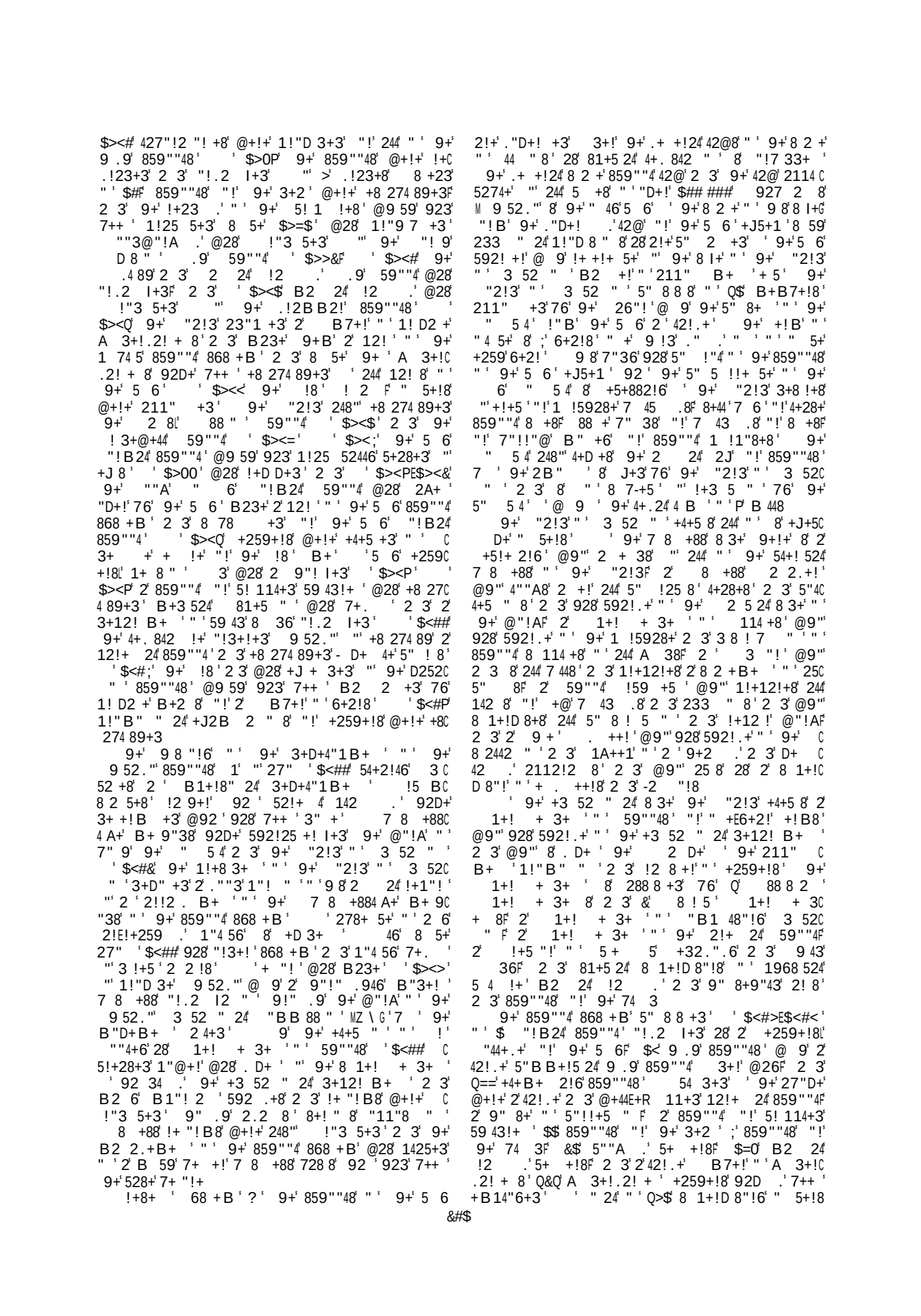

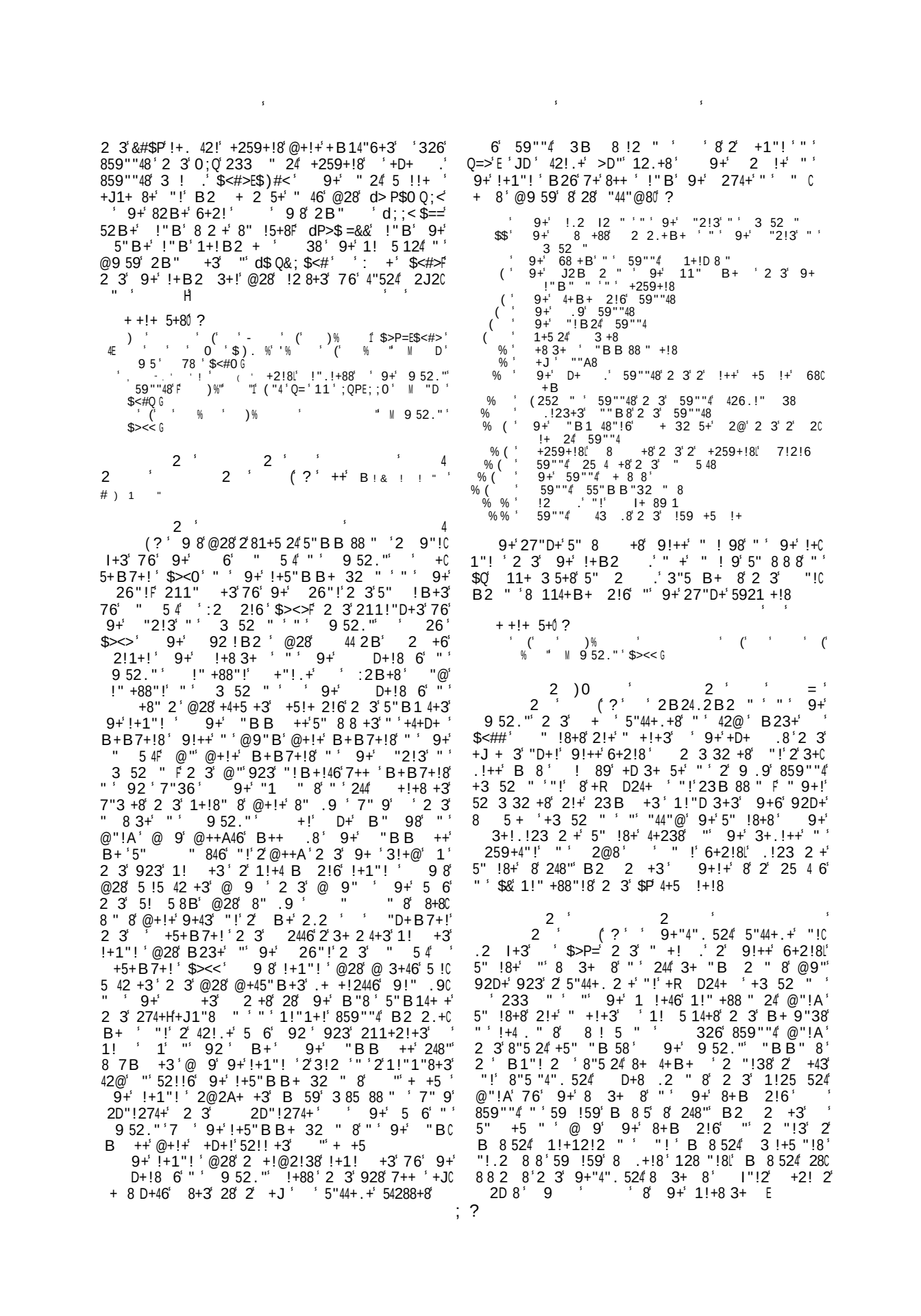

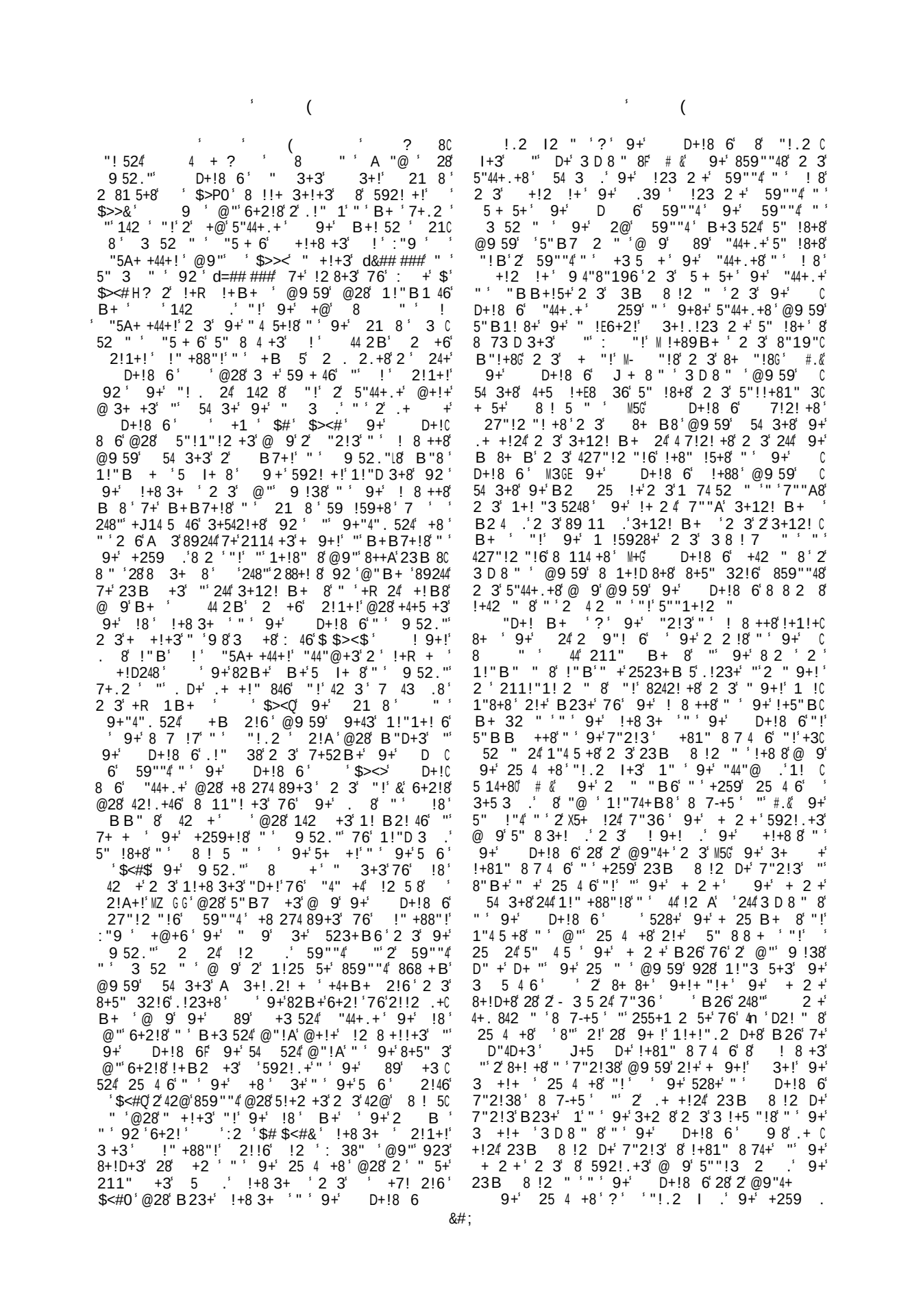

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" ' 2@8' "!' 2' 1!" +88 " 24' 42@' 5" !8+' ' 2 ' 4+28 ' 9!+' 6+2!8' ' @9 59' 2' .!23+' " ' 859"4C 2!89 1' 928' 7++ ' 259 +D+3' $# 1+!' 5+ ' 9 .9+!' 92 ' 92 ' !+R !+3' "!' 9+' 3+.!++' " ' "5 "!' " ' 2@' @9 59' 8' .!2 +3' "' 52 3 32 +8' @9"' 92D+' 5"B 14+ +3' 2' 9!++E6+2!' 1!" +88 " 24' 5" !8+' 233 " ' "' 2 ' 3+!.!23 2 +' 5" !8+' ' 2 ' 21C 1!"D+3' 5"44+.+' "!' @9"' 92D+' 5"B7 +3' 2' 9!++' 6+2!8' 1!" +88 " 24' 5" !8+' @ 9' 9+' !8 ' 859"4C 6+2!8' " ' 9+' 5"44+.+' 5" !8+' ' 8 59' 2' @26' 28' "' 8+5 !+' 7" 9' 9+' 259+4"!8' 3+.!++' 2 3' 9+' 3+.!++' " ' "5 "!' " ' 2@' 9+' 3+.!++' " ' ' 8' " ' 5" +!!+3' 76' 9+' D+!8 6' 7 ' 76' 9+' 25 4 6' " ' 89' +3 524' "44+.+' 2 +!' 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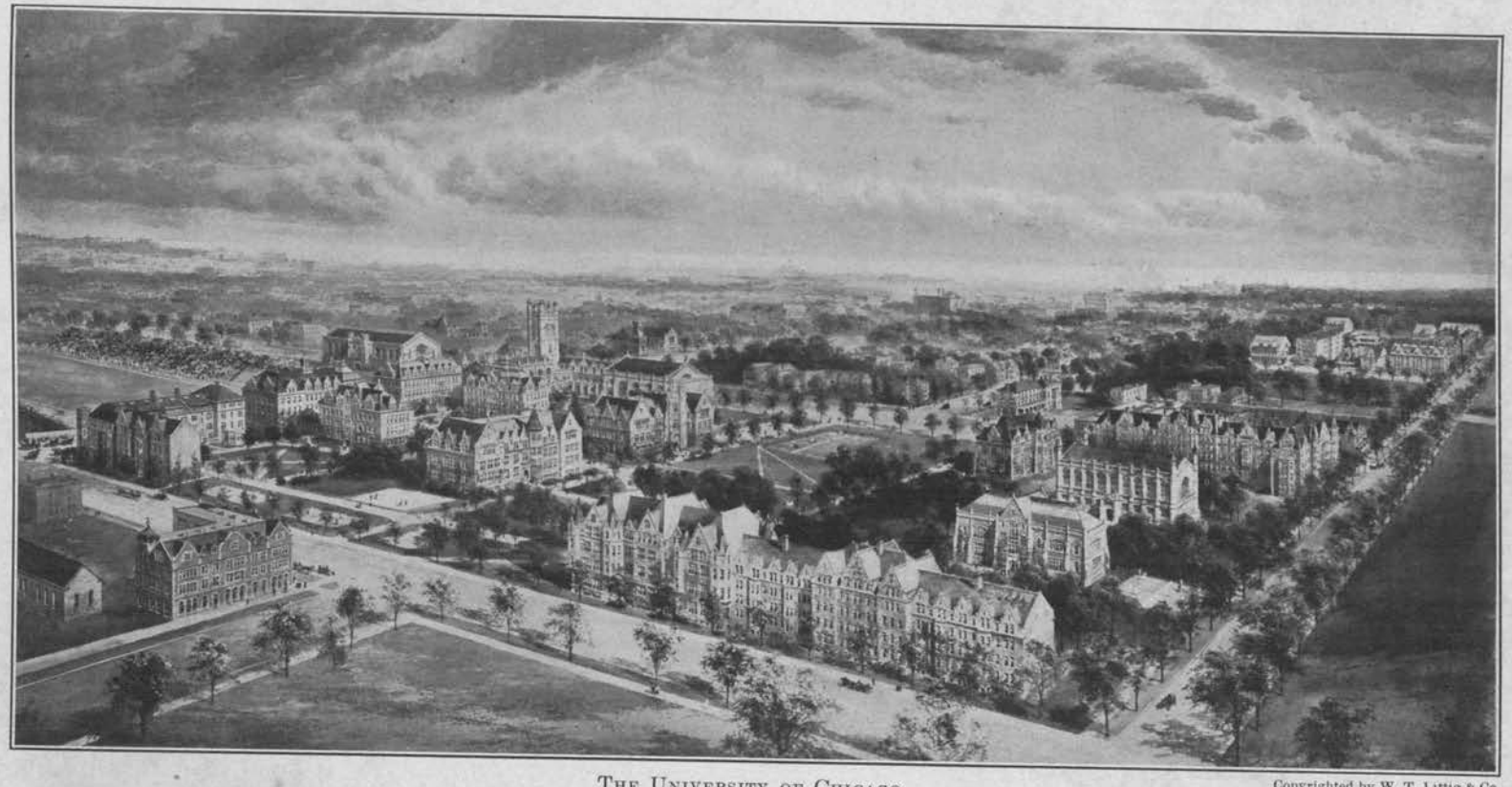
" 9 5' 9+6' 2!+' 25+3' @ 9' 3 2 2' 4 B+8 " +' 2 3' !"" +3' @ 9' !+3' 4+' ' 2!59 +5 !24' 859+B+' 9+' !B' " ' 9+14+6' 2 ' 1' 2 ' 9+' " 8+ ' 76' 9+' !8' 2!59 +5 ' + !6' D+8' "77 ' 928' 8 5+' 7++ ' B"3 +3' ' B2 6' @268' ' 44' 7 43 .8' 9"@+D+!' 92D+' 7++ ' 3+C 8 . +3' ' 92!B" 6' @ 9' 9+' "! . 24' 61+' ' 5" 8 3+!274+' !2 .+' " ' D2! 2 " ' ' 3+ 2 48' 8' B2 2 +3' @ 9 ' 9+' 4 B 8' " ' 2' 8 .4+' 2!59 C +5 !24' 859+B+' 9+' !B' " ' 9+14+6' 2 ' 2 3' ""4 3.+' " ' "8 " ' 9+' " 5 24' 2!59 +5 8' " ' 9+' D+!8 6' 92D+' B"3+4+3' 8"B+' " ' 9+' 42 +!' 7 43 .8' 2 +!' @+44EA "@ ' 2523+B 5' 92448' " ' 9+' .4 89' 5"44+.+8' 9 8' 2 ' 9 52." ' 9+' D+!8 6' "@+!' 8' 8"B+ 9 .' B"!+' 92 ' 8 .C .+8 D+' " ' 2.324+ ' "@+!' 2 ' J "!3F 9+' 9 C 52." ' D+!8 6' 5"B B" 8' A "@ ' 28' C 8" ' 244' 8' 2' !2 9+!' 54"8+' !+1!"3 5 " ' " ' 9! 8 ' 9 !59' 244' J "!3 ' @9 4+' 9+' 9 52." ' D+!C 8 6' 2@' 59""4' 7! .8' "' B 3' .L8' "44+.+' 921+4 ' 2B7! 3.+' 9+'7 43 .8' 2 3' .!" 38' " ' 9+' D+!8 6' @+!+' D24 +3 ' : 46' $' $<#<' 2



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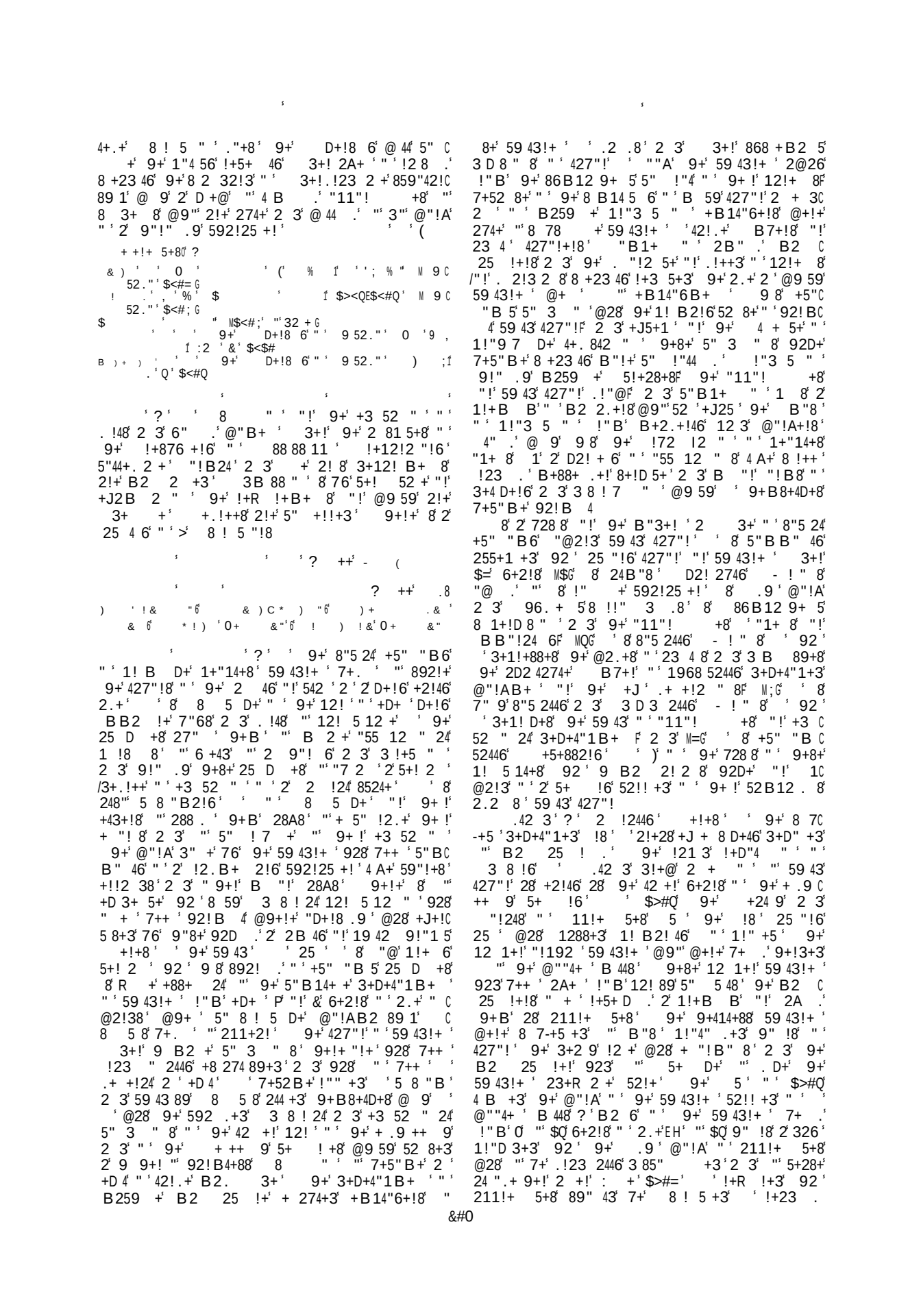
d> <$0 0#>ʾ 9+ʾ D+!8 6ʾ4 7!2! +8ʾ5" 2 +3ʾ " ʾ : 46ʾ $ʾ $<#<ʾ =<Q Q<Qʾ D"4 B+8ʾ 9+ʾ 427"!2ʾ "!6ʾ 2 3ʾ " 9+!ʾ +R 1B+ ʾ " ʾ 9+ʾ D+!8 6ʾ @28ʾ D24 +3ʾ 2ʾ d&0# PQ0ʾ 2 3ʾ 9+ʾ 1!"3 5 D+ʾ 38ʾ 2B" +3ʾ "ʾ d$= ##> 00>ʾ 9+ʾ 2 24ʾ 7 3.+ʾ " ʾ +J1+ 3 !+8ʾ "!ʾ 9+ʾ 6+2!ʾ $<#<E$<$#ʾ @28ʾ J+3ʾ 2ʾ d$ =;$ P&Pʾ 9+ʾ " ʾ ++8ʾ ʾ 9+ʾ 5"44+.+8ʾ 2 3ʾ .!23 2 +ʾ 859""48ʾ 2B" ʾ "ʾ d=#ʾ 1+!ʾ R 2! +!ʾ "!ʾ d$Q#ʾ "!ʾ 9+ʾ 2523+B 5ʾ 6+2!ʾ ʾ 233 " ʾ 427"!2 "!6ʾ 2 3ʾ 5 3+ 24ʾ ++8ʾ 2!+ʾ !+R !+3ʾ D2!6 .ʾ ʾ 2B" 8ʾ @ 9ʾ 9+ʾ 5" !8+8ʾ 2A+ ʾ ʾ 9+ʾ 2@ʾ 59""4ʾ 9+ʾ ++8ʾ 2!+ʾ dP#ʾ 1+!ʾ R 2! +!ʾ 2 3ʾ ʾ 9+ʾ +3 524ʾ 59""4ʾ d&#ʾ 1+!ʾ R 2! +!ʾ +44"@89 18ʾ ʾ 9+ʾ !23 2 +ʾ 59""48ʾ 2!+ʾ 1!"D 3+3ʾ "ʾ 9+ʾ 2B" ʾ " ʾ dQ$ P##ʾ 9+ʾ 8 1+ 38ʾ D2!6ʾ !"B ʾ d=P#ʾ "ʾ d$Q#ʾ +259ʾ 9!" .9ʾ 211!"1! 2 " ʾ 76ʾ 9+ʾ "2!3ʾ " ʾ ! 8 ++8ʾ 2 3ʾ !"B ʾ + 3"@B+ ʾ 38ʾ . D+ ʾ +81+5 2446ʾ "!ʾ 9+ʾ 1 !1"8+ʾ 9+ʾ 8 Bʾ " ʾ dO& P##ʾ 9" "!ʾ 2 3ʾ 8+!D 5+ʾ 859"42!89 18ʾ 8ʾ 2D2 4274+ʾ "!ʾ 9+ʾ 2 3ʾ " ʾ 274+ʾ 2 3ʾ @"! 96ʾ 8 3+ 8 8 5 D+ʾ +2 !+8ʾ " ʾ "+ʾ D+!8 6ʾ ? ʾ 9+ʾ D+!8 6ʾ 6+2!ʾ 8ʾ 3 D 3+3ʾ "ʾ " !ʾ 210 1!"J B2 +46ʾ +R 24ʾ 2523+B 5ʾ 1+! "38ʾ A "@ ʾ 28ʾ R 2! +!8ʾ 9+ʾ 2 B ʾ @ +!ʾ 81! .ʾ 8 BB+!ʾ 9+ʾ 8 BB+!ʾ R 2! +!ʾ 8ʾ 8ʾ 73 D 3+3ʾ "ʾ @"ʾ +R 24ʾ 1+! "38ʾ "!ʾ +!B8ʾ 9+ʾ "B 88 " ʾ " ʾ 2ʾ D252 " ʾ 1+! "3ʾ 7+ @++ ʾ 9+ʾ 81! .ʾ 2 3ʾ 8 B0 B+!ʾ R 2! +!8ʾ . D+8ʾ 2ʾ !++ʾ 1+! "3ʾ " ʾ 27" ʾ 9!++ʾ @++A8ʾ ʾ +1 +B7+!ʾ "!ʾ !+ "D2 " 8ʾ 2 3ʾ !+0 12 !8ʾ 9 8ʾ 9+ʾ D+!8 6ʾ 142 ʾ 8ʾ 8+3ʾ 240 B"8ʾ 5" " 846ʾ 4 9" .9ʾ 8 3+ 8ʾ 2!+ʾ B2 ! 5 42 +3ʾ 2 3ʾ 3+.!++8ʾ 2!+ʾ 5" +!!+3ʾ R 2!0 +!46ʾ 5 8 "B ʾ 2 3ʾ 5" D+ + 5+ʾ 52 8+ʾ 76ʾ 2!ʾ 9+ʾ 42!.+8ʾ B7+!ʾ " ʾ 8 3+ 8ʾ "ʾ + +!ʾ ʾ 9+ʾ 2 B ʾ 9 8ʾ ʾ 9+ʾ 2523+B 5ʾ 6+2!ʾ $<#>E$<#<ʾ =0ʾ 3+!.!23 2 +ʾ 8 3+ 8ʾ B2 ! 5 42 +3ʾ 2ʾ 9+ʾ 7+. .ʾ " ʾ 9+ʾ 8 BB+!ʾ =#<ʾ 2ʾ 9+ʾ 7+. .ʾ " ʾ 9+ʾ 2 B ʾ Q=ʾ 2ʾ 9+ʾ 7+. .ʾ " ʾ 9+ʾ @ +!ʾ 2 3ʾ Q=ʾ 2ʾ 9+ʾ 7+. .ʾ " ʾ 9+ʾ 81! .ʾ 9+ʾ R 2! +!ʾ 868 +Bʾ B2A+8ʾ +259ʾ R 2!0 +!ʾ 2ʾ ʾ " ʾ 8 36ʾ 28ʾ @+44ʾ 28ʾ 2ʾ ʾ " ʾ B+ʾ +. 42!ʾ @"!Aʾ 5" 8 8 8ʾ " ʾ ;ʾ 5" !8+8ʾ @9 59ʾ B++ʾ P 9" !8ʾ 2ʾ @++Aʾ "!ʾ 9+ʾ +R D24+ ʾ " ʾ Pʾ 9" !8ʾ ʾ 288 . +3ʾ @"!Aʾ 27"!2 "!6ʾ 5" !8+8ʾ 5" ʾ 2ʾ 9+ʾ !2 +ʾ " ʾ Q 9" !8ʾ ʾ 9+ʾ 427"!2 "!6ʾ "!ʾ $ 9" !ʾ ʾ 9+ʾ 4+5 !+ʾ!""B ʾ 9 8ʾ 142 ʾ D"4D+8ʾ 5" 5+ !2 " ʾ 1" ʾ 2ʾ +@ʾ 8 3 +8ʾ "!ʾ 2ʾ 1+! "3ʾ " ʾ ;ʾ B" 98ʾ 9+ʾ 868 +Bʾ " ʾ 9+ʾ @9"4+ʾ 928ʾ 1!"D+3ʾ 2ʾ 8 55+88ʾ 9+ʾ 3+12! B+ ʾ " ʾ .4 89ʾ 8ʾ " ʾ 9+ʾ "1 " ʾ 92ʾ !"3 5 "!6ʾ 5"B1"8 0 " ʾ 5" !8+8ʾ B .9ʾ @ 9ʾ 23D2 2.+ʾ 7+ʾ 3 8 ! 70 +3ʾ "D+!ʾ @"ʾ "!ʾ 9!++ʾ R 2! +!8ʾ 8 +23ʾ " ʾ 5" 5+ !2 +3ʾ ʾ " +ʾ ʾ 9+ʾ 2@ʾ 59""4ʾ @92ʾ 2B" 8ʾ "ʾ 2ʾ 8+B+8 +!ʾ 868 +Bʾ 8ʾ 1+!0 B +3ʾ " "ʾ 5+! 2 ʾ 5" !8+8ʾ +J + 3ʾ "D+!ʾ " +ʾ R 2! +!ʾ 2 3ʾ 2ʾ 924 ʾ " 9+!ʾ 3 8 5 D+ʾ +2 !+ʾ " ʾ 9 52."ʾ "!.2 I2 " ʾ 8ʾ 9+ʾ 3 D 8 " ʾ " ʾ 9+ʾ 3+!.!23 2 +8ʾ "ʾ @"ʾ 5"44+.+8ʾ 9+ʾ + "!ʾ "44+.+ʾ 54 3 .ʾ 9+ʾ 9 !3ʾ 2 3ʾ ! 9ʾ 6+2!8ʾ " ʾ 9+ʾ 3+!.!23 2 +ʾ 5" !8+ʾ 2 3ʾ 9+ʾ : "!ʾ "44+.+ʾ 54 3 .ʾ 9+ʾ !8ʾ 2 3ʾ 8+5" 3ʾ 6+2!8ʾ 9 8ʾ 3 D 8 " ʾ 8ʾ 728+3ʾ 1" ʾ 9+ʾ 7+4 +ʾ 92ʾ 9+ʾ !8ʾ @"ʾ 6+2!8ʾ " ʾ 5"44+.+ʾ 92D+ʾ B"!+ʾ ʾ 5"B B" ʾ @ 9ʾ 9+ʾ 9 .9ʾ 859""4ʾ 5" !8+ʾ 92ʾ @ 9ʾ 42 +! 3+!.!23 2 +ʾ 1 !8 8ʾ 9+ʾ !2 8 " ʾ !"Bʾ 9+ʾ " +ʾ A 3ʾ " ʾ 8 36ʾ "ʾ 2 " 9+!ʾ 8ʾ J+3ʾ 2ʾ 9+ʾ B 334+ʾ " ʾ 9+ʾ 5"44+.+ʾ 5" !8+ʾ 2 3ʾ 8ʾ 8 .0 24 I+3ʾ 76ʾ 9+ʾ 4+ʾ " ʾ 88"5 2 +ʾ @9 59ʾ 8 .!2 +3ʾ "ʾ 8 3+ 8ʾ @9"ʾ 92D+ʾ 5"B14+ +3ʾ 9+ʾ @"!Aʾ " ʾ 9+ʾ : "!ʾ "44+.+ʾ 9+ʾ 3+!.!23 2 +ʾ 5 !! 5 4 Bʾ 1 8ʾ 244 9+ʾ 81+5 5ʾ !+R !+B+ 8ʾ ʾ 9+ʾ : "!ʾ "44+.+ʾ 4+2D .ʾ 9+ʾ + "!ʾ "40 4+.+ʾ !++ʾ "!ʾ +4+5 " ʾ 4 B +3ʾ 76ʾ 1!+!+R 8 +8ʾ @ 9 ʾ !2 9+!ʾ .+ +!" 846ʾ 3+ +3ʾ .!" 18ʾ @9 59ʾ 4+23ʾ "ʾ 9+ʾ 9!++ʾ 7255242 !+2 +ʾ 3+.!++8ʾ 9+ʾ D+!8 6ʾ J + 8 " ʾ 8ʾ 2 ʾ "!.2 5ʾ 12!ʾ " ʾ 9+ʾ D+!8 6ʾ +5 !+ʾ 8 36ʾ 5" !8+8ʾ " ʾ 9+ʾ .0 4 89ʾ +J + 8 " ʾ 61+ʾ 2!+ʾ 5" 3 5 +3ʾ 76ʾ 9+ʾ 0 D+!8 6ʾ ʾ 5 +8ʾ 2 3ʾ "@ 8ʾ " ʾ 9+ʾ 334+ʾ +8 ʾ !+3 ʾ 8ʾ .!2 +3ʾ "ʾ 8 3+ 8ʾ @9"ʾ 76ʾ 2 + 30 2 5+ʾ 1" ʾ 9+8+ʾ 4+5 !+8ʾ 9+ʾ !+23 .ʾ " ʾ !+0 R !+3ʾ 7""A8ʾ 9+ʾ 1!+12!2 " ʾ " ʾ @! + ʾ @"!Aʾ 2 3ʾ 9+ʾ 1288 .ʾ " ʾ 24ʾ +J2B 2 " 8ʾ !+259ʾ 9+ʾ +5+882!6ʾ 8 2 32!3ʾ " 9+!ʾ "!Bʾ " ʾ 0 D+!8 6ʾ J + 8 " ʾ 5" 8 8 8ʾ " ʾ 5"!!+81" 3+ 5+ʾ 8 ! 5 " ʾ 9 8ʾ 8ʾ 5" 3 5 +3ʾ 76ʾ B+B7+!8ʾ " ʾ 9+ʾ !+. 42!ʾ D+!8 6ʾ 8 2 ʾ 28ʾ @+44ʾ 28ʾ 76ʾ B+B7+!8ʾ " ʾ 25 4 +8ʾ " ʾ " 9+!ʾ 5"44+.+8ʾ 2 3ʾ 0 D+!8 +8ʾ 9+ʾ @"!Aʾ 8ʾ 9"!" .9ʾ ʾ 8ʾ 592!0 25 +!ʾ 8ʾ 5" 85 + " 846ʾ . 2!3+3ʾ 2 3ʾ 8ʾ 2ʾ D24 274+ʾ 2 3ʾ "ʾ 9 3!+38ʾ " ʾ +2! +8ʾ 8 3+ 8ʾ 2 6ʾ 2B7 " 8ʾ 859""4ʾ +259+!8ʾ 2!+ʾ 5"B7 .ʾ 8 BB+!ʾ !+8 3+ 5+ʾ @ 9ʾ 5"!!+81" 3+ 5+ʾ 8 ! 50 " ʾ 2 3ʾ 2!+ʾ 9 8ʾ @"!A .ʾ .!23 2446ʾ "@2!3ʾ 7259+4"!ʾ 3+.!++8ʾ "ʾ 5"!!+81" 3+ 5+ʾ 8 ! 50 " ʾ 8ʾ 255+1 +3ʾ ʾ 4 + ʾ " ʾ 9+ʾ " +E6+2!ʾ !+8 0 3+ 5+ʾ !+R !+B+ ʾ "!ʾ 9+ʾ 28 +!!8ʾ 3+.!++ʾ 46ʾ 3+!ʾ +J5+1 " 24ʾ 5 !5 B8 2 5+8ʾ 5"B0 14+ +46ʾ 5" !"44+3ʾ 76ʾ 9+ʾ 3+12! B+ 8ʾ 5" 0 5+! +3ʾ 8ʾ " !+8 3+ ʾ @"!Aʾ 5!+3 +3ʾ "@2!3ʾ 2ʾ "5 "!!8ʾ 3+.!++ʾ 9+ʾ D+!8 6ʾ " ʾ 9 52."ʾ 8ʾ R +ʾ ʾ 54 3 .ʾ ʾ 8ʾ "!.2 I2 " ʾ 2ʾ !+88ʾ +12! R + ʾ@9 59ʾ ʾ233 " ʾ "ʾ 1! .ʾ 244 9+ʾ " 5 24ʾ 3"5 B+ 8ʾ " ʾ 9+ʾ D+!8 6ʾ 1 70 4 89+8ʾ $=ʾ 85 + 5ʾ -" ! 248ʾ 2 3ʾ 928ʾ 1ʾ "ʾ $<$#ʾ 1 74 89+3ʾ =##ʾ D"4 B+8ʾ 9+ʾ 85 + 5ʾ -" ! 248ʾ " ʾ 9+ʾ !+88ʾ 2!+ʾ 8 78 3 I+3ʾ "ʾ 9+ʾ 2B" ʾ " ʾ 9+ʾ 5"B+ʾ " ʾ 2ʾ 924ʾ B 44 " ʾ " ʾ 3"442!8ʾ X 9+ʾ D+!8 6ʾ !+.2!38ʾ 1 74 52 " ʾ " ʾ 2ʾ 85 + 5ʾ 592!25 +!ʾ 28ʾ 2ʾ 4+. B2 +ʾ D+!8 6ʾ 5 " 2 8 58"ʾ +B8 !2 " ? 9+ʾ R 2! +!ʾ 868 0 +Bʾ 2 3ʾ +81+5 2446ʾ 9+ʾ 5" 8 + 56ʾ " ʾ 9+ʾ 8 BB+!ʾ R 2! +!ʾ 52 8+ʾ 9+ʾ B7+!ʾ " ʾ 3 +!+ ʾ 8 3+ 8ʾ 5" +5 +3ʾ @ 9ʾ 9+ʾ D+!8 6ʾ ʾ 2ʾ 8 .4+ʾ 6+2!ʾ "ʾ !+259ʾ 2ʾ 9 .9ʾ " 24ʾ P&P< "!ʾ 9+ʾ 6+2!ʾ $<#>E$<#<ʾ 9+ʾ " 24ʾ !+. 8 !2 " ʾ "!ʾ 9+ʾ 3 +!+ ʾ R 2! +!8ʾ @28ʾ 8 BB+!ʾ ;#P#ʾ 2 B ʾ Q0#Pʾ @ +!ʾ Q0P>ʾ 81! .ʾ Q=#=ʾ ʾ "!3+!ʾ "ʾ B2A+ʾ 9+ʾ " 24ʾ B7+!ʾ " ʾ P&P< 5"B0 12!274+ʾ @ 9ʾ 9+ʾ 8 2 8 58" ʾ " 9+!ʾ 8 " 8ʾ 89" 43ʾ 7+ʾ !+3 5+3ʾ "ʾ 2ʾ 9!++ER 2! +!ʾ 728 8ʾ 92ʾ 8ʾ 76ʾ 9+ʾ 8+ʾ " ʾ 9+ʾ ʾ " +ʾ 8 3+ ʾ ʾ !+8 3+ 5+ʾ "!ʾ < B" 98ʾ 245 42 +3ʾ " ʾ 9 8ʾ 728 8ʾ 9+ʾ " 24ʾ !+. 8 !2 " ʾ 7+5"B+8ʾ ;&;<ʾ 9+ʾ B7+!ʾ ʾ 9+ʾ .!23 2 +ʾ 859""48ʾ "!ʾ 9+ʾ 6+2!ʾ $<#>E$<#<ʾ <#>ʾ @+!+ʾ B+ ʾ2 3ʾ P#>ʾ @"B+ ʾ ʾ 9+ʾ 3+!.!23 2 +8ʾ 9+ʾ B+ ʾ B7+!+3ʾ $#;>ʾ 2 3ʾ 9+ʾ @"B+ ʾ >P<ʾ 9+ʾ +!B ʾ Sʾ 54288 +3ʾ Tʾ 8ʾ 2114 +3ʾ "ʾ 8 3+ 8ʾ "D+!ʾ Q$ 6+2!8ʾ " ʾ 2.+ʾ @9"

' (

"!' 82 8 25 "!6' !+28" 8' 2!+' 23B +3' "' 5" !8+8' ' 9+' D+!8 6'7 ' 2!+' " ' 52 3 32 +8' "!' 3+.!++8' 2 6' B2 !+' 2 3' +2! +8' B+ ' 2 3' @"B+ ' 3+8 !+' "' 1 !8 +' 5" !8+8' "!' @9 59' 9+6' 92D+' 21 3+' 2 3' ++3' 9+8+' 2114 52 8' 2!+' 52!+ 446' 8 +3' " '23B 88 " ' "' +4 B 2 +' @+2A' 8 3+ 8' @9"' B 26' 7+' !6 .' "' +D23+' !+R !+C B+ 8' 9+8+' 54288 +3' 8 3+ 8' 2!+' 9+!+C "!+' 76' "' B+2 8' 3+ 524' @ 9' S' 1+5 24' C 3+ 8 T' ' 9+' 8+ 8+' '@9 59' 92' +!B' 8" + ' 8+3' ' 9+' 8 B B+!' R 2! +!' B 2 6' +259+!8' 2!+' +!"44+3' 28' S' 54288 +3 T' " ' 7+52 8+' 9+6' 5" 43' " ' 1!+8+ ' 1!"1+!' 5!+3+ 248'7 ' 7+52 8+' 9+6' 3+8 !+' "' 1"8 1" +' 9+' !" +' " ' !+. 8 !2 " ' 28' 52 3 32 +8' "!' 3+.!++8 !23 2 +' 2 3' !" +88 " 24' 59""48' ?' 9+' !23 2 +' 59""48' 2!+' " 274+' "!' 9+' 42!.+' 2B" ' " '!+8+2!59' '1!".!+88' 9+' 5""1+!2 " ' D+8 .2 D+' @"!A' " ' 9+' 25 4 6' 2 3' 23C D2 5+3' 8 3+ 8' 9+' B7+!' " ' 8 !" .' B+ ' @9"' 2!+' + .2.+3' '!+8+2!59' 2 3' 2!+' 248"' C +!+8 +3' ' +259 .' '$<#>E$<#<' 9+' !23 C 2 +' 59""48' " ' ! 8'2 3' +!2 !+'!+. 8 +!+3'>0# 3 +!+ ' 8 3+ 8' " ' @9"B' ;<>' @+!+' @"B+ ' 9+' .3+ ' !23 2 +' 59"'4' " ' 5 + 5+' !+. 8C +!+3' P=&3 +!+ '8 3+ 8' " '@9"B' $$# @+!+' @"B+ ' 9+' D 6' 59""4' 8' 3 8 . 89+3' 76' 9+' 25' 92' ' . D+8' 8' 3+.!++8' " 46' "' 5"44+.+' .!23 2 +8' ' 8 8 8' 1" ' 9+' +5+88 6' " ' D"52 " 24' !2 .' ' 928' 2 ' 8 2446' 42!.+' 25 4 6' 2 3' ' 9+' 2523+B 5' 6+2!' $<#>E' $<#</ !+. 8 +!+3' ;<0' 3 +!+ ' 8 3+ 8' "' B" +6' 8 78 36' 8' . D+ ' 3 !+5 46' "' 8 3+ 8' 8' " ' 9+' !23 2 +' D 6' 59""4' 9 8' 3+12! C B+ ' 5" 3 5 8' 2' 8 . 52 ' @"!A' 9!" .9' 8' 52 3 2D 2 ' 8+B 2! +8' 8' -" ! 24' 9+' - . % ' = 1' 2 3' 9+' % ' A) ' (0 1' 2!+' B1"! 2 ' "!.2 8' " ' 1 74 52 " ' 9+' 8 3+ 8' !+1!+8+ ' 1!25 52446' 244' 9+' 59 + ' 3+ "B 2 " 8' ' 9+' 5" !6' 9+' 859""4' 8' 2 ' +.!24' 12!' " ' 9+' 8 " ' 2 3' + -"68' 9+' 4 7+! 6' " ' +259 .' @9 59' 592!25 +! I+8' 2' ! +' D+!8 6' 9+' 59""4' " ' 2@' 8' " +C @"! 96' !"B' 9+' 25' 92' '!+R !+8' 9!+' 6+2!8' " ' 5"44+.+' @"!A' "!' !+. 42!' 23B 88 " ' 92' 9+' !8' 6+2!' " ' 42@' B 26' 7+' 5" +3' 28' 9+' " ! 9' 6+2!' "!' 9+' 7259+4"!/8' 3+.!++' 92' 9+' 528+' 868 +B' " ' 8 ! 5 " ' 8' B23+' 2' 1!"B + ' +2 !+' " ' 9+' !2 .' 92' 9+' 9!++E6+2!' 5" !8+' 8' " ' 4"524' ' 8' 85"1+' 7 ' 1!+12!+8' 9+' 8 3+ 8' "' 1!25 5+' '2 6' .4 89E81+2AC .' - ! 83 5 " ' 9+' 8 3+ ' 7"36' 8' 5"8B"C 1"4 2 F $Q;' 3 +!+ '5"44+.+8' @+!+' !+1!+8+ +3' ' 9+' 859""4' 428' 6+2!' M$<#>E$<#<G' 9+' 859""4' 8' 5"BB +3' "' 9+' 1! 5 14+' 92' 54288+8' 8924' 7+' 8B 244' + " .9' "' 2 "!3' 9"!" .9' 3 D 3 24' !2 .' 9+' 4 7!2!6' @9 59' 5" C 2 8' 27" ' ;; ### D"4 B+8' 8' ' 8 !+' 2 3' +J5+44+ 5+' 1!"72746' 9+' 7+8' 4 7!2!6' ' 9+' 88 88 11' (244+6' "!' 9+' 859"42!46' 8 36' "' .4 89' 2 3' B+! 52' 42@' 4B"8' 244' B+BC 7+!8' "' 9+' 25 4 6'. D+' 9+ !'+ !+' B+' "' 9+'E 1!" +88 " 24' +259 .'"' 42@' 9+' 25 4 6' 5" C 2 8' 2' 1!+8+ ' M$<#>E$<#<G' >' B+ ' 2' 1!" +8C 8"!8' "' ' !2 A' 9+' " 24' !+. 8 !2 " ' ' 9+

2@' 59""4' "!' 428' 6+2!' M$<#>E$<#<G' @28' ;#;' ' 9+' 59""4' "' 3 52 " ' 54 3+8' " !' "!.2 C I2 " 8' ?' 2' !23 2 +' +12! B+ ' "!' 9+' 85 + 5' 8 36' " ' +3 52 " 24' 1!"74+B8' 2' "44+.+' " ' 3 52 " ' ' @9 59' 8 3+ 8' 2!+' 1!+12!+3' "!' 1"8 " 8' 28' 9 .9' 859""4' "!' .!23+' +259+!8' 2' D+!8 6' .9' 59""4' "!' 1!25 5+' 2 3' "78+!D2 " ' @"!A' 2 3' 2 ' 4+B+ 2!6' 59""4' 54 3 .' 2' 3+!.2!+ ' +12! B+ ' 4 I+3' 28' 2' 1+32.". 524' 427"!2 "!6' 9+' "44+.+' " ' 3 52 " ' . D+8' 9!" .9' 8' 3+12! C B+ 8' 3 D 3 24' 2 + " ' "' D2!" 8' 61+8' " ' 5" 8 ! 5 D+' @"!A' 7 ' 2' 9+' 82B+' B+' C 54 3+8' 244' 9+' 5" D+ " 24' B2 +! 248' "' 7+' " 3' ' 9+!' 859""48' 28' 6+2!' M$<#>E$<#<G' 9+' !+. 8 !2 " ' " ' 3 +!+ ' 3 D 3 248' ' 9+' "44+.+' " ' 3 52 " ' @28' <P>' " ' @9"B' >;0' @+!+' @"B+ 3+ ' +' ?' 9+' !72 '4"52 " ' 9+' 1!+C 3"B 2 5+' " ' .!23 2 +' 3+248' 2 3' 9+' +2!46' B1!+88' " ' D+!8 6' 8 2 32!38' 92D+' 1!+D+ +3' 9+' 3+D+4"1B+ ' " ' 2' 8 !" .' 5"44+.+' 81 ! ' 2B" .' 9+' 3+!.!23 2 +8' J ++ ' !++A' + +!' !2 +! +8' 2!+' !+1!+8+ +3' 2 ' 9+' C D+!8 6' ' B7+!' " ' @"B+ L8' 8"5 + +8' 2!+' 248"' " 5 2446' !+5". I+3' ' B+ L8' 54 7' 1!"C D 3+8' 2' 8"5 24' 5+ +!' "!' 9+' B24+' 8 3+ 8' @9 4+' 9+' D+'@"B+ L8' 92448' @ 9' 9+ !'5"B B" ' 3 .' !""B8' !+5+1 " ' !""B8' + 5' 2 "!3' 8"5 24' 4 +' "!' B2 6' @"B+ ' 8 3+ 8' +2!46' QP' 1+!' 5+ ' " ' 9+' 8 3+ 8' 4 D+' ' 9+' 3"!B C "! +8' " ' 9+' D+!8 6' 7" ' 0# 1+!' 5+ ' " ' 9+' 8 3+ 8' 92D+' 9+ !' 4"524' !+8 3+ 5+8' @ 9 ' 2' B 4+' 2 3' 2' 924' " ' 9+' D+!8 6' 7 43 .8' !"B' 9+' " 8+ ' 9+' 8 2 32!38' " ' 9+' 8 " ' 92D+' "11"8+3' 3+!.!23 2 +' 7" 8 +!" 8 +88' 2 3' 9"'34 B 8B' ' 82 +' 2 3' 8" 3' 8 3+ ' 8+ B+ ' 8 11"! 8' 9 8' !23 C " ' 2 6' 3+!.!23 2 +8' 2!+' +!+8 +3' ' 2 94+ 58' 7 ' 9+' D+!8 6' 5"B B 6' 8' 76' "' B+2 8' 3"B 2 +3' 76' 2 94+ 5' +J5 +B+ ' 3+12! B+ ' " ' 968 524' 4 !+' 2 3' 94+ 58' B2A+8' ' 2' 1"4 56' "' +!+8' 9+' 42!.+8' 1"88 C 74+' B7+!' " ' 8 3+ 8' ' B2 6' "!B8' " ' @9"4+8"B+' 2 3' !+5!+2 D+' +J+!5 8+ 3 52 " 24' "4 56' " ' 9+' D+!8 6' ? ' 9+' D+!8 6' " ' 9 52." "55 1 +8' 2' R +' 1"8 C " ' @ 9' !+ +!+ 5+' "' 9 .9+!' +3 52 " ' ' 9+' 334+' +8 ' 1" ' '42!.+46' !+8 8' 9+' !+81" C 8 7 4 6' " ' B2 2 .' 2 3' +J + 3 .' .!23 2 +' @"!A' " ' 9+' 9 .9+8' 61+' 2 3' 9+' 4 B2 +' +8 274 89B+ ' " ' 1!" +88 " 24' 859""48' 1" ' 2' .-!23 2 +' 728 8' ' 9+' " 9+!' 92 3' 9+' 4"52!' " ' ' 2' .!+2' 5 6' 9!"@8' 1" ' 9+' D+!8 6' 9+' "74 .2 " ' "' 1!"D 3+' "!' 3+!.!23 2 +' +259 .' ' 8' 9+' 2 B' " ' 9+' D+!8 6' "' 4 44' 7" 9' 9+8+' 5 " 8' @ 9' 3+4 6' "' 9+' 7+8' 8 2 32!38' 2 3' @ 9" ' 825! 5 .' + 9+!' 28A' "' 9+' " 9+!' ' +59 524' 2 3' B+3 524' 8 ! 5 " ' 28' @+44' 28' " 9+!' "!B8' " ' 1!" +8C 8 " 24' @"!A' 2!+' +D+!' +8 274 89+3' "!' +J + 3+3' ' 8' 24 ".+ 9+!' 4 A+46' 92' 9+6' @ 44' 7+' B2 C 2 +3' 1" ' 2' .!23 2 +' 728 8' 9+!+' @ 44' 7+' "' 2 +B1' "' 5"B1+ +' @ 9' +J 8 .' 8 C " 8' " ' 9+' 5" D+ " 24' 61+' "' 2!' 28' 5"4E



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@! .' 2 3' 2! 9B+ 5' 2 3' 2' 8 ' "' 54" 9+8'
. D+ ' "' +259' 6+2!46 ' '1!"D 3+3' 92 ' 25 "! +8'
@+!+' "' 7+' @9 +@289+3' @ 5+' 2' 6+2! ' 2 3' 2 '
244 B+8' 1!"1+!46' D+ 42 +3 ' +12!2 +' 84++1C
 .' 212! B+ 8' @+!+' "' 9+' 1!"D 3+3' "!' 21C
1!+ 5+8' " ' 3 +!+ ' 8+J+8 ' 2 3' " ' B"!+' 92 '
@"' @+!+' "' 892!+' 2' 7+3 ' 11!+ 5+8' @+!+' "'
2 + 3' 59 !59' 2 ' 4+28 ' " 5+' 2' B" 9 ' 2 3' 9+'
- 8 5+8' @+!+' "' 211" ' @"' 81+5 "!8' ? ' " +'
" ' @9"B' 89" 43' 7+' 2' 54+!. 6B2 ' ? ' "' D 8 ' 9+'
 25 "! +8 ' 44 B 448' 2 3' 25 "! +8' @+!+' "' 7+'
!+. 8 +!+3' 2 2446' @ 9' 9+' 4+!A' " ' 9+'
 +25+ ' 2 3' - 8 5+8' 923' 1"@+!' "' 4 5 ' 4 +8'
" ' !"B' ^Q' "' ^P' "!' +.4+5 ' "' "78+!D+' 9+'
!+. 42 " 8' 9+' 5 ' 2114 +3' "' 5" " ' 25C
"! +8' 28' @+44' 28' "' @""4+ ' 2 3' 9+' 1!+2B74+'
B23+' ' 2114 5274+' " ' " 46' "' 211!+ 5+8 '
7 ' "' 244' 5" " ' 2 3' @""4+ ' 25 "! +8' '
@9 59' Q# "!' B"!+' 1+!8" 8' @+!+' +B14"6+3 '
24 9" .9' 9+' 542 8+' !+42 .' "' !+8 ! 5 " ' " '
9" !8' 2 3' 1!"D 3 .' +3 52 " 24 25 4 +8'
+J1!+8846' 2114 +3' "' 211!+ 5+8' " 46 ' M ++'
 59 8' 2 3' 2!! 8" L8' / ' (' 2 % '
1' 11 ' $&E$OG ' +D+ ++ ' 6+2!8' 42 +!'
M$>$<G 2' B"!+' +J + 8 D+' 25 ' 2 B+3' 2 ' 244
 25 "!6' @"!A' @28' 1288+3 ' 7 ' ' 2 4+3' 42!. +46'
" ' 2114 52 " ' "@ .' "' B1+! +5 ' 2.+ 5 +8' " '
+ "!5+B+ ' ' 8' 8 ..+8 D+' "' " +' 92 ' '
1!"9 7 +3' 9+' +B14"6B+ ' ' 25 "! +8' " '
59 43!+ ' 3+!' <' 6+2!8' " ' 2.+' 2 3' 4 B +3' 9+'
@"!A .' 9" !8' " ' 59 43!+ ' !"B' <' "' $& 6+2!8'
" ' 2.+' "' $Q' 9" !8' 1+!' 326

 !"B' 9 8' B+' "!' 1@2!3' " ' 924 ' 2' 5+ !6'
9+' 9 B2 2! 2 8' 8 ! . .4+3' @ 9' 9+' 4'
(' 1!+1"88+88 " ' " ' ! 89'4 +' "!' 2' 1!" +5 +3'
59 439""3 ' 9+' 42@' " ' $>$<' @28' " ' + "!5+3 '
2 3' 2' "624' "B B 88 " ' ' $>; ;' " 3' 59 4C
3!+ ' @"!42 .' 28' B 59' 28' $P' 9" !8' 32 46 ' 9+'
 "44"@ .' 6+2!' 2 " 9+!' 25 ' " ' 2' B"!+' 5"B1!+C
9+ 8 D+' 2 !+' @28' 1288+3 ' @9 59' M$G' 4J+3' 2'
@"!A .' 326' 8"' 28' "' 27"4 89' .9 ' @"!AF
MQG' 1!+85! 7+3' 2 ' 4+28 ' @"' 9" !8L' 859""4 .' "!'
59 43!+ ' 3+!' $;F M;G' 4 B +3' 9+ !' @"!A .'
9" !8' "' <F 2 3' M=G' 255"B14 89+3' " 9+!' !+ "!B8'
4 A+' J .' 9+' 4+ . 9' " ' 9+' @"!A .' @++A '
 9+' !+R !+3' 859""48 ' 9"@+D+! ' @+!+ '5"B B" 46'
A+1 ' 1' 76' 9+' 25 "! +8' 9+B8+4D+8 ' 2 3' @+!+'
" '4 4+' +3 52 " 24' D24 +' "' 9+' 59 43!+ ' M ++'
 ! + '0 + &" 4
 ' $>=;' 7+.2 ' 9+' 868 +B' " ' S' 924 ' B+ T'
 9 8' @28' 2' 5"B1!"B 8+' 7+ @++ ' 9+' "!5+8'
@9 59' 8" .9 ' 9+' +3 52 " ' " ' 2' 59 43' 2 3' 9+'
+B14"6+!8' @9"' 3+8 !+3' 59+21' 427"!' 9+'
+B14"6B+ ' " ' 2' 59 43' 3+!' $;' @28' B23+'
5" .+ ' 1" ' 9 8' !+. 42!46' 1!"3 5 .' 2' 5+!C
 52 +' " ' 2 + 32 5+' 2 ' 859""4' "!' 2 ' 4+28 ' ;'
9" !8' 32 46 ' "!' "!' 24 +! 2 +' 3268 ' 9+' 2B" '
" ' 32446' 25 "!6' @"!A' @28' 4 B +3' "' & ' 9" !8 'H
 9+' 924 E B+' 868 +B ' ' @ 4' 7+' 8++ ' 923'
1" 8' " ' 5"!!+81" 3+ 5+' @ 9' 9+' 8 2 " ' '
@9 59' 59 43!+ ' 8 2446' 3' 9+B8+4D+8' 3+!'
1! B D+' +5" "B 5' 5" 3 " 8' ? ' 2' 3 8 ! 7 " '
" ' B+' 7+ @++ ' 859""4' 2 3' @"!A ' 9+!'
4" .' 7+ "!+' 923' 82 3' S' +' B 8 ' 8+ 3' 9+'
7"68' "' 859""4' " +' "!' @"' 9" !8' 2' 326' 2 3' 92D+
9+B' 4+2! ' 2' !23+' "!' 9+' !+8 ' " ' 9+' B+ T'
 ' 9+' "11" + 8' " ' 59 43' 427"!' @+!+' " '
82 8 +3' @ 9' 9+' 924 E B+' 868 +B ' 9+'
6" .' 59 43!+ ' 8 ' 8 +!+3' 3+!' 25 "!6'
5" 3 " 8 ' 2 3' 9+' 859""4' @28' " + ' 2!5 524 '
 ' $>0>' 924 ' B+' @28' 1!"9 7 +3' "!' 59 43!+ '
3+!' $#' 2 3' 9 8' 4 B ' @28' !2 8+3' "' $$ '
$><$' 2 3' "' $Q' ' $><<' ' $<#=!E$<#P' 9+!+'
@+!+' 8 44' "D+!' >## ### 924 E B+' @"!A+!8 ' +2!46'
2 ' ' 9+' +J 4+' 3 8 ! 5 8' ' 2 5289 !+' @ 9' 2'
+@' ' 3++' 3+!' +J 8 .' + 25 B+ 8'
924 E B+' 427"!' 52 ' 7+' 5"!!+5 +3' + 9+!' 76'
 ! 9+!' 12!4 2B+ 2!6' 4+. 842 " ' "!' 76' 25 8' " '
4"524' 5" 5 48' ' $<#>E$<#<' 2' 8 !" .' 2. C
 2 " ' 7+.2 ' "' + 3' 924 ' B+' "!' 59 43!+ '
3+!' $=' /
 .42 3' "7 2 +3' 1 74 5' +3 52 " ' ' $>0#'
2 3' 9+' 5"B1!+9+ 8 D+' 25 ' " ' $>0>' " ' " 46'
!+8 ! 5 +3' 59 43' 427"!' 2 3' 542! +3' 4+. 842 " '
1+! 2 .' "' ' 7 ' 248"' B23+' +3 52 " ' 5"B C
1 48"!6 ' ' $<#<' 9+' 2.+' " ' +J+B1 " ' !"B'
859""4' 2 + 32 5+' @28' !2 8+3' "' $=' 2 3' 9+'
5" 3 " 8' " ' +B14"6B+ ' " ' 59 43!+ ' 7+4"@'
 92 ' 2.+' @9"' 923' 5"B14+ +3' 859""4' @"!A'
@+!+' B"!+' !+. 42!' 2 3' 8 ! .+ ' 9 43!+ '
 3+!' $$ 52 " ' 7+' +B14"6+3' ' 2.! 5 4 !24'
@"!A ' 2 3' "D+!' 92 ' 2.+' B 8 ' 92D+' 5"B14+ +3'
 9+' " ! 9' .!23+ ' 9+' +J ' .!+2 ' 8 +1' @28' '
!+. 42 .' 9+' +B14"6B+ ' " ' 59 43!+ ' " ' 9+'
728 8' " ' 9+' 592!25 +!' " ' 9+' @"!A' 3" +' 6'
 9+' 4+. 842 " ' " ' $<#$' 2' D2! + 6' " ' +B14"6C
B+ 8' @+!+' 1!"9 7 +3' "' 59 43!+ ' 3+!' $&F
. !48' 2 3' @"B+ ' @+!+' +J+B1 +3' !"B' .9 '
@"!AF' 1968 524' 5" 3 " 8' " ' @"!A' @+!+' 82 +C
. 2!3+3F' 2 3' ' 25 "! +8' 2 3' B2 6' !23+8'
6" 9' 3+!' $&' B 8 ' 92D+' 2' 5+! 52 +' " ' 1968C
 524' +88 ' 9+' +J ' 1" ' " ' 2 25A' @28' 9+'
"55 12 " 8' " ' 59 43!+ ' " 8 3+' 9+' 859""4'
9" !8 ' 9+' B7+!' 8"' +B14"6+3' ' 52!!6 .'
B 4A' 2 3' 12!5+48' ' 8 !++ ' !23+8' 2 3' ' 9"B+'
"!' 8@+2 89"1' @"!A' @28' D+!6' 42!.+ ' "' 2! '
4+. 842 " ' 928' " ' "D+!5"B+' 9+' +D 48' ' 9 8'
 +43' @9+!+' @"!A' " 8 3+' " ' 859""4' 9" !8 '
5" 14+3' @ 9' 859""4' 8 ! 5 " ' 5+! 2 46' !+C
8 4 8' ' 9+' "D+! 2J .' " ' 59 43!+ ' 9+' BC
14"6B+ ' " ' 9 43!+ ' 5 ' " ' $<#;' 9+' !+8 4 '
" ' 9+' +!3+12! B+ 24' "B B ++L8' !+1"! '
.!+2 46' !+8 ! 5 +3' 8 59' +B14"6B+ ' 2 3' .2D+'
4"524' 2 9"! +8' 1""!+!' "' 8 ' ! 9+!' !+8 ! 5 '
 9+' +B14"6B+ ' " ' 59 43!+ ' " 8 3+' 859""4'
9" !8 ' 9+' 5 ' " ' $<#;' !+. 42 +3' 8 !++ ' !23C
 .' 76' 1!"D 3 .' "!' 9+' 4 5+ 8 .' " ' 59 43!+ '
8"' +B14"6+3 ' 3 8 . 89 .' 76' 9+' 723.+' @"! '
59 43!+ ' 3+!' 859""4' 2.+' 2 3' 59 43!+ ' 27"D+'
859""4' 2.+' ' 244"@ .' 9+' "! B+!' "' + .2.+'
 ' !23+' " 46' " 8 3+' " ' 859""4' 9" !8 ' 7 ' 4 B C
 .' 9+' B7+!' " ' 9" !8' 7" 9' @ 9' !+81+5 ' "'
 9+' " 24' B7+!' 1+!' 326' 2 3' 9+' +J25 ' 9" !8'
7+ @++ ' @9 59' 8 59' +B14"6B+ ' 8' 4+.24 ' M ++'
(5 "!' 42!AL8' = ' ' ' = ' '
 ' 7 ' - 1' 44+ ' " ' +3' 2 +8'
 !+2 ' " ' 27"!' 289 . " ' :2 2!6' $<#<'
 " ' >#' 11 ' QOE;& G' 5+' 9+' "1+ .' " ' 9+'
@+ + 9' 5+ !- ' "@ .' "' 2' A++ ' !+24 I2 " '
" ' 9+' 1!+D24+ 5+' " ' 1968 524' 2 3' 3 8 ! 24

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7D " 846 9+42!.+ B7+!'27"D+ @+!+ 8B244 89"18F P> 1+!' 5+ @+!+ !+1"! +3 28 @"!A . 3 8 ! +8 2 3 QP 1+!' 5+ 3+4 D+!6 "55 C 12 " 8 9+ D2! " 8 +!B2 8 2 +8 2!+ 2 4 7+! 6 "' 8 114+B+ 9+ 27"D+ 4+. 842 " 28 9+6 8++ 9 4+ 9+ 8 2 32!38 27"D+ 8+ "! 9 8++B 4"@ 8 1!"7274+ 92 2 5"B1+ C 82 " +J 8 8 9+ ! . 3 868 +B " 81+5 " @9 59 1!+D2 48 2 3 8 52!! +3 " 76 9+ 4"524 1"4 5+ + @++ 859""4 2 3 89"1 24B"8 244 9+ B+ " 9+ +!B2 59 43 27"D+ $Q 8 542 B+3 7 9+ 12 +! 24 2 3+ @9 59 8 23"1 +3 8++B8 "5" ! 7 +B 59 "@2!3 1!+C D+ .92!B 4 !+8 4 8 +3 2 +8 ? 9+!+ 8 " 2 " 24 5" C !"4 " 59 43 427"!' $<#0 D+ B+28 !+8 @+!+ 7!" .9 7+ "!+ " .!+88 9+ 2 B " @9 59 @28 "' + 4 8 9+ 8+!D 5+8 " 9+ 2 " 24 ."D+! B+ 9+ !8 @28 2 7 44 5"!1"!2 C .2 2 " 24 9 43 27"!' "B B ++F 9+ 8+5" 3 2 B"3+4 59 43 427"!' 7 44 "!' 9+ 8C ! 5 " "4 B7 2F 9+ 9 !3 2 7 44 "' 1!"D 3+ "!' 2 2 " 24 9 43!+ L8 !+2 F 9+ " ! 9 1!"D 3 . "!' 2 D+8 .2 " " 9+ 427"!' " @"B+ 2 3 59 43!+ 3+!' 9+ +3 2 +8 "B B 88 " " 27"!F 9+ 9 A "@ 28 9+ +D+! 3.+E 2!8" 8 9 43 27"!' 44 8" .9 1!"9 7 9+ !2 81"! 2 " +!8 2 +5"B B+!5+ " 59 43E427"!EB23+ ."38 - 8 28 5" D 5 EB23+ ."38 2!+ "@ +J54 3+3 !"B "!+ . 5"B B+!5+ B3+!' 2! 42@8 46 9+ !8 2 3 " ! 9 7+52B+ 42@8 92 6+2! @9 4+ 9+ 8+5" 3 @28 1288+3 $<#> 9+ +D+! 3.+E 2!8" 8 7 44 2 B+3 1+ 24 I+ C +!8 2 +5"B B+!5+ @9+!+ 5" 43 7+ 89"@ 92 9+ 427"!' " 59 43!+ 923 7++ +B14"6+3 7 9+ 7 44 3 3 " 5"B+ 2 D" + 9+! 9" 8+ "@ ." 9+ 5" D 5 " 92 5" C 8 " 2446 +J + 3+3 9+ 1"@+!8 " . !+88 +D+4"1B+ 2 3 + "!5+B+ " 59 43 427"!' 4+. 842 " 2 3 8 B 42 " 1 74 5 "1 " 928 7++ "!' 8+D+!24 6+2!8 3+!' 9+ 4+23 " 9+ 2 " 24 9 43 27"!' "B B ++ 9 8 8"5 + 6 @9 59 $<$# 923 "D+!' =### B+B7+!8 2 3 2 7 3.+ "!' +J1+ 8+8 2B" ." B"!+ 92 dP# ### 1+!' 6+2!' 9"438 2 2 24 5" D+ " A++18 2.+ 8 2 @"!A 9"8+ !+. " 8 @9+!+ 9+ 3+D+4"1B+ " B2 25C ! . 3 8 ! +8 !+ 3+!8 9+ ++3 B"8 1!+88C . !+D +@ " 8 2 24 $ % 1!"C D 3+8 9+ B"8 5"B14+ +5"B B+ 2!6 "!+5+ 3+D+4"1B+ 8 8 @"!A 9 8 5"B B ++ 928 42 3 3"@ 5+! 2 8 2 32!3 5" 3 " 8 7+ B+ @9 59 2!+ 9+ !+8 4 8 " +J1+! + 5+ + 3+2D"!8 8+5 !+ 9+ A 3 " 23B 8 !2 D+ B259 +!6 @9 59 1!"D+8 + +5 D+ + "!5 . 4+. 842 " 9+ 255"!3 . 4"524 5" 3C " 8 2 3 9+ 8 2 +" 4"524 "11"8 " B2A+8 255"B B"32 " 8 28 2!+ 28 1"88 74+ 9+ 5" !8+ " 9 8 1!"5+3 !+ 928 7+5"B+ +D 3+ 92 9+ + !+ 8 7-+5 " 59 43 427"!' 8 D28 46 5"B14 52 +3 2 3 9+ 8"B+@92 8 B14+ 1! 5 14+8 4+88E239+!+3 " 4" .+! 8 4 5+ 2 32!38 "!' +. 842 " ? 9+ "44"@ . 2!+ 9+ 8 2 32!38 "@ 8 2446 8" .9 ?

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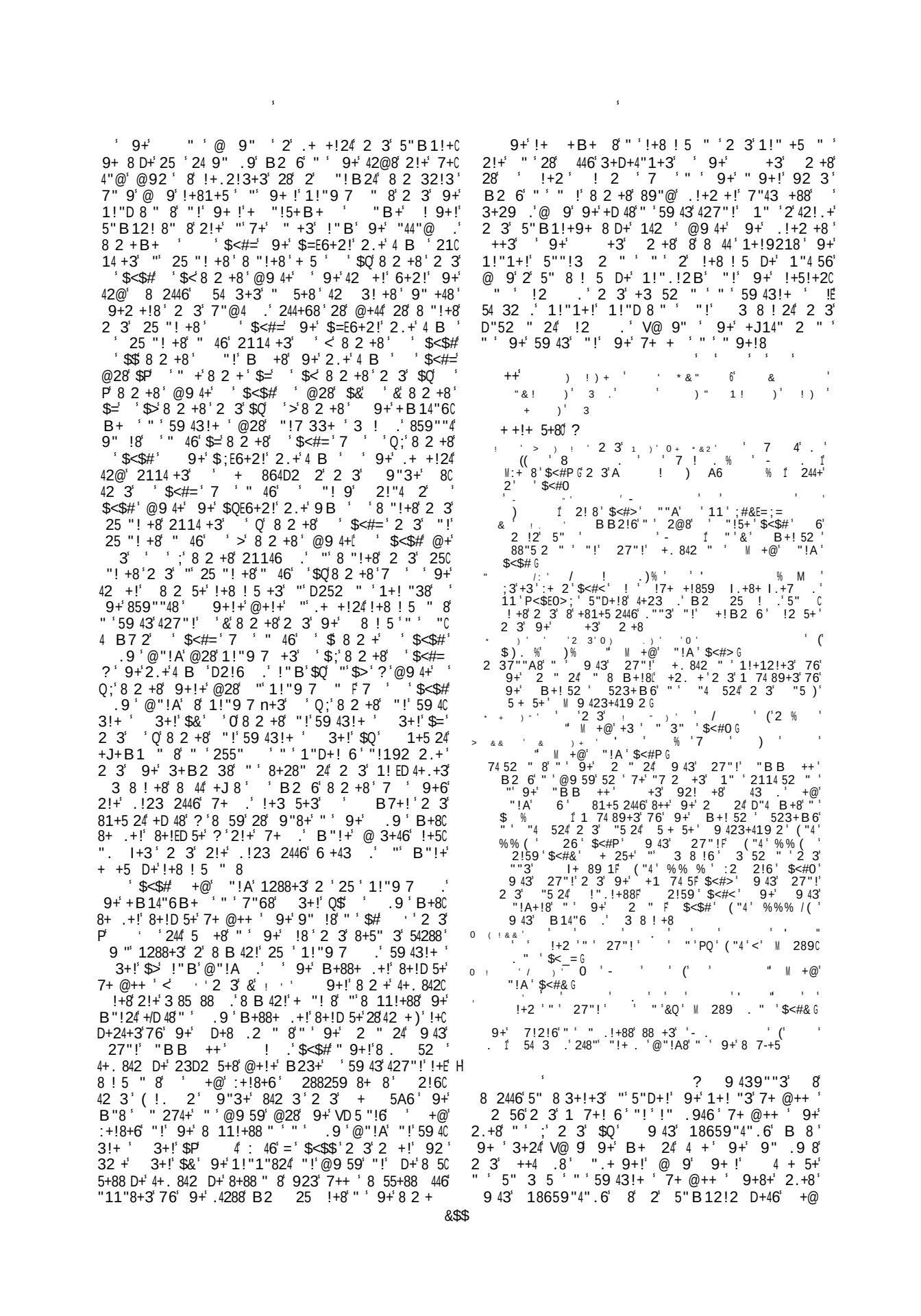

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B"3 52 " ' 9!" .9 927 2 " ' ' 59 439""3 7+52 8+ " ' 425A " ' +J1+! + 5+ ' 9+ 8 5 8 B2 +8 ' 9+BC 8+4D+8 ' D+!6 .+ +!24 2 3 3+ + @268 ' 9+ V12! 5 42!' 4 +' L" ' B2 +8 2 " ' 7+ .' 3+ +!C B +3 76 9+ + D !" B+ ' 9+ 8 5 8 ' 7+C 52 8+ " ' 9+ ! 5"!!+42 " ' @ 9 9+ 1968 524 .!"@ 9 2 3 3+D+4"1B+ ' " ' 9+ +!D" 8 868 +B + 3 "' "44"@ 2 !96 9B 5 "!3+!" ' 3+D+4"1B+ " +8+ ' 7+ .' 1!"B + ' "!' 2 89"! ' 1+! "3 9+ 2 " 9+! 9+ 1928+ " ' +259 @9 59 8 1!"B + 2 ' !8 ' 8 288"5 2 +3 @ 9 9+ 1968 524 @+44E7+ .' " ' 9+ 59 43 ' 9+ !+81" 8+ 8 "' 2 5" 5!+ + D+!6 3+ + 8 2 " ' 2 3 9+ !+8 4 .2 +3 8 B B+3 2 + ' 1968 524 82 8 25 " ' !"@ .' " ' " ' 9 8 8 2.+ 8 9+ +!+8 ' 2 3 9+ 3+8 !+ "! +B" " 24 82 8 25 " ' 9+ 59 43 25 8 8 59 2 @26 28 "' 8+4+5 ' 9"8+ !+81" 8+8 @9 59 7! .'9 B 9 8 !+8 4 ' 9 8 8 9+ B+ @9+ ' 9+ D2! " 8 1"@+!8 7!" .9 ' " ' 76 8 5 D+ 25 " ' 2!+ +8 +3 2 3 ! +3 2 3 1 +3 2.2 8 9"8+ " ' " 9+! 59 43!+ ' ' 8 9+ 8 2.+ " ' 1+!C 8" 24 5"B1+ " ' !8 ' " + 8 5 2 3 9+ ' 2 " 9+! 8 +J1+! B+ +3 @ 9 9+ +B1928 8 7+ .' " ' B" "! 25 D 6 ' 9+ 59 43L8 1" ' " ' D +@ 8 2!!"@ 9+ 8+4 92 ' 8 7+ .' 14+28+3 2 3 82 8 +3 8 2 D+!6 12! 24 " + ' 8 8 44 9+ 3 D 3 24 +!+8 8 2.2 8 ' 9+ .!" 1 C +!+8 8 ' "! !2 9+!' ' 81 +" ' 9+ .!" 1 +!+8 8 ' 9+ +J 3+D+4"1B+ ' 8 9+ 211+2!2 5+ " ' 9+ C .2 .' T 81 ! ' 9 8 1928+ 1+!D23+8 2 3 4 + 5+8 244 9+ .!"@ .' 2 3 592 . .' C 8 5 8 ' 12D .' 9+ @26 "! 9+ B"!+ !23 524 592 .+8 @9 59 2A+ 1425+ 2 ' 23"4+85+ 5+ 99 59 43 8 8 44 +!+8 +3 1! B2! 46 ' 9 8 "@ ' @+44E7+ .' 7 ' 9+ 8+4 928 +J12 3+3 9+ 8"E 5244+3 8"5 24 8+4 "@ 7+5"B .' 1!"B + ' 52!!6 .' @ 9 ' 2 .!+2 +!+B1928 8 " ' 9+ +4C 4+5 24 +4+B+ 8 ' 9+ 8 2 " ' / H 9+ 8 5 D+ 4 +" ' 9+ 59 43 "44"@8 9 8 142 ' ' 3+D+4"1B+ ' 7+5"B .' B"!+ 5"B14+ 28 B"!+ " ' 9+ 8 5 8 +B+!.+ B"!+ 9 .946 81+5 24 I+3 28 D2! " 8 1928+8 7+5"B+ 3 +!+ C 2 +3 9+ 4 +" ' 23D2 5+ 7+ .' !"B 9+ 1968 C 524 9!" .9 9+ +B" " 24 "' 9+ B"!+ +4C 4+5 24 1928+8 " '+259 2 3 !"B 2 2!!"@ 12! 24 D +@1" ' "' 2 7!"23+! B"!+ .+ +!24 " + 9+8+ 1928+8 2!+ " ' 3 8 5 46 B2!A+3 " ' !"B +259 " 9+! +D+ @ 9 9+ 3+D+4"1B+ " ' 9+ 82B+ 8 5 2 3 28 9+ D2! " 8 8 5 8 3+D+4"1 2 3 +!+ !2 +8 2 3 7+5"B+ 1!"B C + '2 3 +!+ 2.+8 9+!+ 8 .!+2 5"B14+J 6 2 3 5" 8 2 "D+!4211 . 9+ 12! " "' 7+ 1426+3 76 +3 52 " ' 9 8 3+D+4"1B+ @ 44 3+1+ 3 42!.+46 1" @9+ 9+! 9"8+ 5" !"4 7+4 +D+ 92 ' 9+8+ 592 .+8 "55 ! 1! B2! 46 28 2 !+8 4 " ' +! .!"@ 9 "! 28 2 !+8 4 ' 12! 46 2 ' 4+28 " ' 9+ 4 + 5+ " ' + C D !" B+ ' 9+ 5" 8+ 8 8 " ' "1 " ' 2 ' 1!+8+ ' 8++B8 "' 7+ 92 ' 7" 9 25 "!8 5" ' 7 ' 92 ' + 9+! 928 44 5" !"4 9+ B"!+ 9+ + D !" B+ ' 1!+8+ 8 8 2 " 8 5244 .' "! 9+ +J+!5 8+ " ' 9+ 12! ' " ' 9+ 59 43 " ' 9+ 9 .9+! 2 3 B"!+ "!B46 8+ 4 1928+8 " ' 9+ D2! " 8 8 5 8 ' 9+ 7+ +! ' 1!"D 3+3 92 ' 9+ 3+B2 38 B23+ 7+. ' 2 ' 9+ 4+D+4 " ' 3+D+4C "1B+ ' 2 ' @9 59 9+ 59 43 8 2 3 .!23 2446 592 .+ ' 3 5 4 6 5"B14+J 6 2 3 592!25 +! ' 9+ D2! " 8 8 3 +8 B23+ " ' 59 43!+ L8 +!C +8 8 2 ' 89"@ 9+8+ .+ +!24 + 3+ 5 +8 ' 2 3 2 ' " +! B2 +! 24 " ' D24 + "' 9+ +3 52 "! ' 2 !2446 ' 2 + " ' ."+8 92 3 ' 92 3 @ 9 +!+8 ' 9+ B1"! 2 ' 3 +!+ 5+8 7+ @++ ' 9+ 2 + " ' " ' 9+ 59 43 2 3 92 ' " ' 9+ 23 4 ' .!"@ ' " ' 2 3 2!+ 52 8+3 76 9+ 3 +!+ 5+8 ' 9+ +!+8 8 " ' 9+ @"' 54288+8 ' 9+ +!+8 8 " ' 9+ "!B+!' 2!+ 3+ +!B +3 3 !+5 46 76 C 8 5 ' 9"8+ " ' 9+ 42 +!' B"!+ 42!.+46 76 !2 C .' 5 8 "B ' 2 3 927 2 " ' 9+ 2 + " ' " ' 9+ 2 6" .' 59 43 ' 2 !25 +3 76 9+ 9 .8 92 ' +!+8 ' 9 B ' 8 . D+ ' 2 ' !8 ' "' 7! .9 46 5"4"!+3 "7-+5 8 ' 4" 3 8" 38 ' B"D .' 9 .8 ' .""3 9 .8 "' +2 ' 2 +!' 9+ 2 + 38 "' +@' "68 ' +2 8 " ' 1968 524 1!"@+88 .2B+8 D"4D .' 8A 44 " ' " +' A 3 "!' 2 " 9+! ' !23 2446 ' 28 9 8 C 8 5 8 3+D+4"1 2 3 9+ 38 92 ' 9+ 3+! D+8

1+!8" 24 7+ + ! "B 8"" 3" . 9 8 2 + " 1288+8 "" 9 .8 5" 8 3+!+3 B"!+ @"! 9 @9 4+ 76 1+"14+ . + +!24 4 2446 9+ 5"B+8 "" 2 + 3 "" 9+ 86B7"48 " B2 9+B2 58 9+ 2!. B+ 8 "! !+ 2! "!9+ B+ 9"38 ++3+3 B2A . 2 "! + 9+ A 3 " 8 2 " 521274+ " 2 !25 . 2 3 9"43 . 9+2 + " 3+1+ 38 1" 9+ 8 5 D+ +R 1B+ " 9+ 3 D 3 24 7 248"" 3+1+ 38 1" 9 8 +J1+! + 5+ 9+ 9 .8 5" 8 3+!+3 @"! 96 " 2 + " 76 8"5 + 6 2 42!. + B 8 8"B+ @26 7+ 5" +5 +3 @ 9 8"B+ 2 D+ +!+8 " !8 5 " 9+!592!25 +! 8 5 " 9+ BB2 !+ B 3 8 8 425A " 8 +23 +88 + " 8 5" 8 2 46 592 . . !+B2 . "5 88+3 " 2 "7-+5 " !3+2 "! 2 D+!6 89"! 1+! "3 " B+ 2 3 9+ B "D . " "" 8"B+ 9 . +48+ 9+ 59 43 8 2 9+ B+!56 " 9 8 8 !!" 3 .8 274+ "" !+8 8 9+ 2 !25 D+ +88 " 2 6 9 . 5"B . @ 9 9+ "5 8 " 5" 85 " 8 +88 9 +J0 1+! + 5+ 2 3 .!"@ @"592 .+8 "55 ! !8 2 6 " +4 +" " 9" .9 8 521274+ " 9"43 . 2 + " "! 2 5!+28 .46 4" .+! 1+! "3 " B+ 7+52 8+ " 9+ .!+2 +! 1"88 7 4 +8 " 288"5 2 " 2 3 +427"!2 " 2 3 8+5" 3 9+ 59 43 4+2! 8 92 8 "" 9 8 23D2 2. + "" "D+!5"B+ 9+ + 3+ 56 " 2 + " "" 89 2 3 "" 9"43 "" 9+ 28A 92 3 3+81 + 9+ + "! D"4D+3 8 +23 " !+R ! . 5" 8 2 592 . + 9+ 59 43 .!23 2446 7+5"B+8 521274+ " 1!"4" .+3 1+! "38 " 25 D 6 24" . " +4 + 2 3 92 1+!9218 " + "!B+!46 " 4 4+ +!+8 "" 9 B " 9+!+ @"!38 28 9+ 59 43 .!"@8 "43+! 9 8 1"@+! "" . D+ 2 + " 5!+28+8 7!+23 9 8 !+ . 9 2 3 3 !2 "

9+ 592 .+8 1+!5+1 " "55 ! 24" . 9!++ 4 +8 2B+46 2 3+5!+28+ 9+ 1!"1"! " " " B+ 24 4 + 92 8 1+!5+1 24 2 5 5!+28+ 9+ 54+2! +88" 1+!5+1 8 2 3 2 2!!"@ . " 9+ +43 " 1+!5+1 " 9+ 6" . 59 43 8 +88+ 2446 8+ 8"!6 2 3 B" "! 9+!+ "!+ 9 8 B+ 24 4 + B 8 7+ B23+ 1 D+!6 42!. +46 " 1+!5+1 8 8 9+ .!"@8 +J1+! + 5+ 9+ 9 .9+! B+ 24 8 2 +8 5!+28+ 1!"1"! " "! 8 +23 " 244"@ . 9 8 2 + " "" 7+ +D+! 3! . !"B " + 8+ 8"!6 +J1+! + 5+ "" 9+ +J 9+ J+8 " " +2 3 9"438 9+!+ "! 2 5!+28 .46 4" .+! 1+! "3 " B+ 9 8 J . 2 3 9"43 . " 2 + " 76 " + 8+ 8"!6 +J1+! + 5+ "" 9+ +J54 8 " " 9+!8 B 8 D"4D+ 9+ 8+ " " 9+! B+ 24 8 2 +8 2 3 9 8 3+5!+28+ 9+ 1!"1"! " " 1+!0 5+1 8 8 " + "78+!D+3 92 2 6" . 59 43 8++8 2 3 9+2!8 B 59 B"!+ " 9 8 + D!" B+ 92 9+ 23 4 3"+8 7 " " +5+88 6 9+ 1+!0 5+1 8 .2 +3 9 8 @26 B 8 7+ D2. + 9216 2 3 " + 255 !2 + 46 76 J . 2 + C " 5"B12! . 5" !28 . " 5 . 3+ 2 48 8 44 A "@4+3 . " 9+ 8 2 " . 2 +3 2 3 1+!5+1 8 B23+ 54+2! 3+ + 2 3 255 !2 + 9+ @"!A " B2 6 D+8 .2 "!8 +B1928 I+8 9 8 5!+28+ 1"@+! " 3 85! B 2 " @ 9 23D2 5 . 2. + 89"@ . 92 59 43!+ " " $&& 3"" !"B @ 5+ "" 9!++ B+8 28 @+44 28 59 43!+ " " & +8 8 " 1"@+! " 8+ 8+ 3 85! B 2 " 9+ 3+D+4"1B+ " " 9+ 8 5 D+ +!+8 8 " 9+ 59 43 ".+ 9+! @ 9 9+ !2 . @9 59 9+ !+5+ D+8 7" 9 + 3 "" 3 85" !2. + 2 3 C 9 7 . + +!24 3 85! B 2 + "78+!D2 " 2 3 8 +23 "" "524 I+ 24" . 5+! 2 3+ +4 +8 8"" 92 1+!5+1 " 4 A+ 244 " 9+! 12! 8" B+ 24 4 + + 38 "" 7+5"B+ 81+5 24 I+3 2 3 3+D+4"1+3 9+ 3 !+5 " 8 @9 59 8 8+3 9 8 9+ "43+! 59 43 1+!5+ D+8 B"!+ 8"B+ +438 92 9+ 6" .+! 59 43 3"+8 9+ 81+5 5 +438 3+C 1+ 3 . D+!6 42!. +46 " 9+ !2 . @9 59 9+ !+5+ D+8 !"B 2 +3 52 " 24 1" " D +@ 9+ ++3 "! 2 7!"23 8+ 8+ +J1+! + 5+ "! 9+ 6" . 59 43 52 " 7+ "D+!+B1928 I+3 8 1!" 5 + 56 9+ B2 1 42 " " 9+ B"!+ 5"B14+J B+ 24 8 2 +8 8 3 !+5 46 5"!!+42 +3 @ 9 9+ ! 59 +88 54+2! +88 2 3 7!+23 9 " 9 8 +2!46 8+ 8+ 1+!5+1 " 8 9+ ++3 "! 3+D+4"1C . !2 " 2446 5" +5 " @ 9 32 46 +J1+! C + 5+8 9+ 1"@+! "" 1+!5+ D+ 9 8 + D!" B+ 8 . 2 9 8 8+ 8+8 28 ++3+3 2 3 9+ "" 5""!C 3 2 + 2 3 5"!!+42 + 9+8+ +J1+! + 5+8 @ 9 9 8 4 + " 9" .9 2 3 25 " 9 8 8 " 12!2B" B1"! 2 5+ 2 3 5"B1! 8+8 2 42!. + 12! " 9+ 859""4 +3 52 " " 9+ 59 43 3+! $#

B+ 24 B2.+!6 9+ @"" 59 + 3 +!+ 5+8 7+ @++ 59 43!+ 2 3 23 4 8 2!+ 9+D D 3 +88 " 9+ B2.+ 2 3 9+A 3 " B2.+ 8+3 B"8 !+R + 46 8 2 5"B B" "55 !!+ 5+ "! 9+ 6" . 59 43 "" 5" 8+ 9+ 1!"3 5 D+ 5!+2 D+ B2.+ " 9 8 1426 4 + @ 9 9 8 B+B"! +8 " 25 24 +J1+! + 5+8 9+ B7+!8 " 59 43!+ 3+! > 6+2!8 " 2.+ @9"" 92D+ B2. 2!6 5"B12 " 8 5" !B 9 8 + 3+ 56 !"B 9+ 23 4 1" "D +@ 9+ 59 43 8 " + +44 . 2 4 + 7 1!"72746 2 42!. + 1!"1"! " " 9+ 4 +8 "43 76 59 43!+ " 9 8 2.+ 2!+ 3 + "" 2 !+24 5" 8 " 9 8 5" 8 " 2! 8+8 !"B @"" 52 8+8 ? 9+ .!+2 D D 3 +88 2 3 !+24 6 " 9+ 59 43L8 1426 4 + 2 3 9+ 425A " 9 8 12! " 2 5" 85 " 8 +88 " 9+ ++3 " 3 8 . 89 . 7+ @++ 2 3 9+ !+24B " !+24 4 + J1+! C + 5+ 2 3 9+ !2 . " 9+ 1+!5+1 D+ 1"@+!8 8 2446 5"!!+5 9 8 3 5 4 6

9+ 8+5" 3 3 +!+ 5+ 92 " 9+A 3 " B+ C 24 B2.+ 8+3 !+R + 46 8 " B"!+ B1"! 2 5+ 9+ B"!+ BB2 !+ 9+ B 3 9+ .!+2 +! 9+ 4 A+4 9""3 92 2 @ 44 3+24 @ 9 B2.+8 " 5" C 5!+ +J1+! + 5+8 @ 9 1"88 746 9+ D 8 24 BC 2.+ +J5+88 " 9+ " 9+! 61+8 2 ! 6 14 8 +J1+! + 5+ + 3 "" 5!+28+ 9+D24 + " 9+ 4+88 5" 5!+ + 2 3 2 9 4 B2.+8 9+ 59 43 9 A8 +!B8 " 9+ 5" 5!+ + "7-+5 "!8" 3 @9+!+28 9+ 23 4 8+8 8"B+ 86B7"4 8 2 3 . "! 2 3 !+1!+8+ . 9+ +J1+! + 5+ 8 +1 9 8 1!". !+88 !"B 5" 5!+ + "" B"!+ 278 !25 B2.+ 8 1!"72746 9+ 8"E5244+3 .+ +! 5 B2.+ @9 59 12! 2A+8 " 9+ 2 !+ " +259 9+ 25R 8 " 76 9+ 59 43 " 42 . 2.+ 7" 9 8 "!24 2 3 8@! + "!B 8 5" 3 " 9 8 3+C D+4"1B+ 9+D24 + " 9+D+!724 B2.+"D+! 9+ 5" 5!+ + 5+! 2 528+8 8 D+!6 .!+2 8 B"!+ 5" D+ + 82D+8 B+ 8 B"!+ 255 !2 + 2 3 8 B"!+ D+!824 7 9+ 59 43 " 46 3 8C 5"D+!8 9 8 2 +! 2 1!"4" .+3 +J1+! + 5+ @ 9 1+!5+1 24 42 . 2.+ 5 " 2446 9+ 5" E

0$;

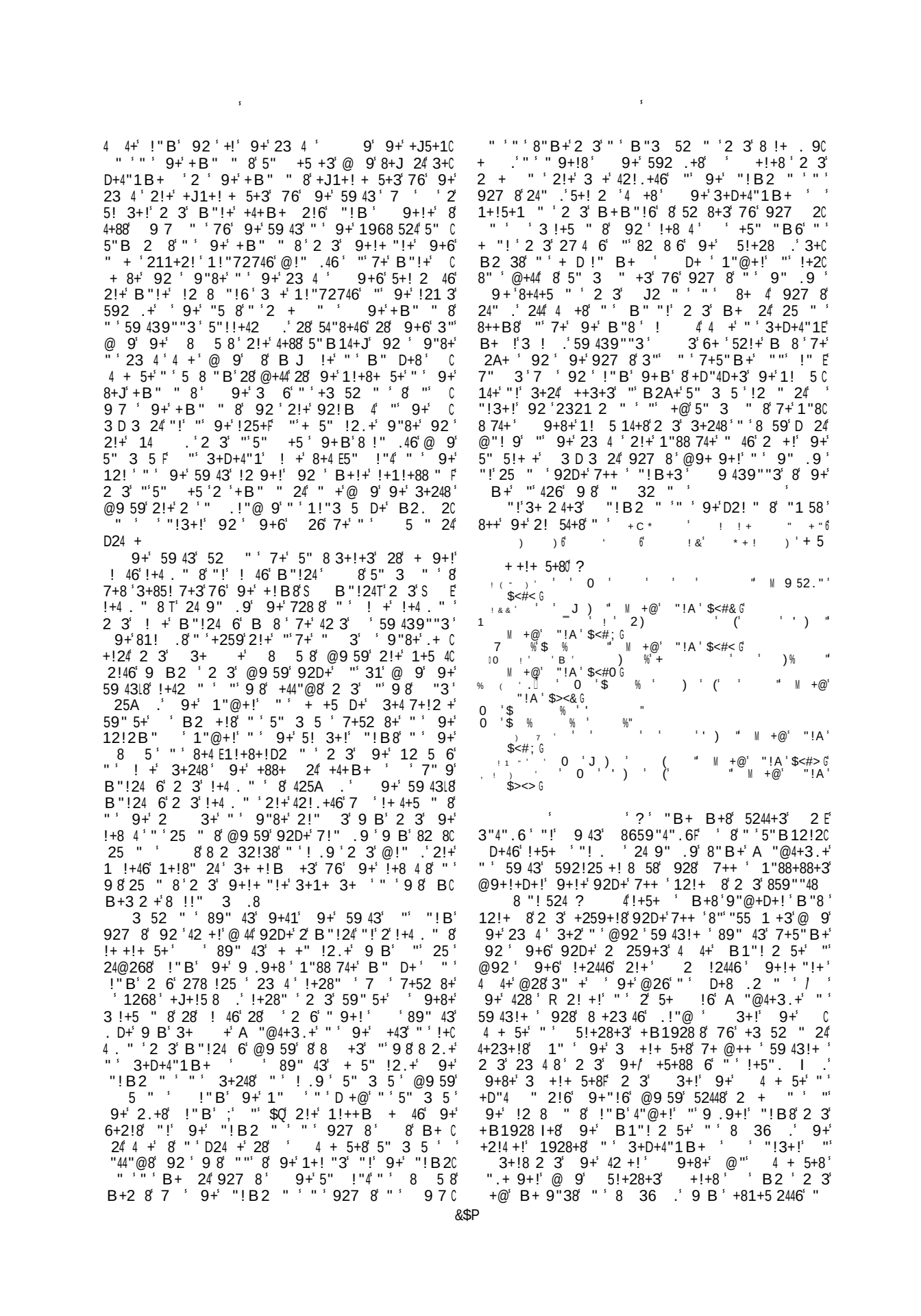
!+ +' B2.+' 8++B8' "'4 4+' 8+' 9+' "! . 24' +J0 1+! + 5+'2 3' 9+' 86B7"4' D+!724' "!' " 9+!@ 8+' @9 59' 8 2 38' "!' '7+ .' 9+' B1"! 2 ' +4+0 B+ 8

3 52 " ' 9+ ' 89" 43' 8++' "' ' 92 ' 9+' 59 43' 928' 54+2!' 3+ +' 1+!5+1 8'2 3' 9+ ' 92 ' 9+' B"8'5" D+ + '86B7"48' 2!+' !B46' @+43+3' "' 9+B' 92 ' 9+' B2.+8' " ' 86B7"48' "' 7+' 8+3' '42 +!'4 +' B26' 92D+' 2' ! 59' !+ +!+ 5+' "' 5" 5!+ +' +J1+!+ 5+' 48"' '89" 43' + 5" !2.+' 9+' 2 !24' 5!+2 D+' B2.+!6' " ' 9+' 59 43' 24" .' 1!" 274+'4 +8' B2A .' 1"88 74+' "!' 9 B' 9+' !+5" 8 ! 5 " ' " ' 9 8' + D !" B+ ' 28' @+44' 28' 9+' 23- 8 B+ ' "'

9+' 592 .+8' @9 59' 2A+' 1425+' '2' 59 43L8' B+B"!6' @ 9' 23D2 5 .' 6+2!8E2!+' B 8 2A0 274+' 9+ !'52 8+' 8' 1!"72746' 5"B14+J' "@+!' B B+3 2+' B+B"!6' 5!+28+8' 1' "' 27" ' $P' 6+2!8' " ' 2.+'2 3' 9+ ' !+B2 8' 8 2 " 2!6' "@+!' '4". 524' B+B"!6' 5!+28+8' '2' .!+2 +!' 1!"1"! " ' 92 ' 1"@+!' '3+8 4 "!6' B+B"!6' 9+' 592 .+8' 2A .' 1425+' '2 + " ' +!+8 ' 2 3' 1+!5+1 " ' 1!"72746' 255" ' "!' 9 8' B0 1!"D+B+ ' '81 +' " ' 9+' 25 ' 92 ' 9+' 1! B2!6' !+ + D+' 1"@+!' " ' 9+' 7!2 ' 5!+28+8' 4 4+' "!' " +' "!' 1"88 746' +D+ '3+5!+28+8' @ 9' 2.+' 9+' 27 4 6' "' 5" 5+ !2 +' 9+' 2 + " ' 2 3' 9+' !+1+ " ' " ' +J1+!+ 5+8' 7" 9' " ' @9 59' 5"B+' @ 9' .!"@ 9' + 3' "' J' 9+' B2 +! 24' 9+' 7!"23+ .' 2 3' 9+' 5"!!+42 " ' " ' +J1+!+ 5+8' 2 3' 9+!+ "!+' 9+' 5!+28+' ' B7+!' 2 3' ' "!.2 I2 " ' " ' 9+' 288"5 2 " 8' 248"' + 3' "' 9"43' 25 8' ' B 3'@9 59' '+2!4 +!'6+2!8' @" 43' " '92D+' !+B2 +3' ". 524' B+B"!6' 8'2 +5 +3' B"!+' 92 ' 3+8 4 "!6' B+B"!6' 7+52 8+' 244' " ' 9+8+' 592 .+8' !+8 4 .' ' B1!"D+B+ ' " ' 9+' 5 " ' 4 + 5+' 9+' "!B+!' @9 4+' " 46' 8"B+' " ' 9+B' 4 + 5+' 9+'42 +!' 6'592 .+' ' 9+' A 3' " ' +J1+!+ 5+' 2 + 3+3' "' @ 44' +5+88 2 +' 2'592 .+' ' 9+' B2 +! 24' !+B+B7+!+3' + 5+' 592 .+8' ' +!+8 8' 2!+' 12!244+4+3' 76' 5"!!+0 81" 3 .' 592 .+8' ' B+B"!6' 9+' 3+D+4"1B+ ' 7+ .' !"B' 9+' 5" 5!+ +' 8+ 8"!6' 2 3' B" "!' "' 9+' B"!+' 278 !25' 2 3' !+42 " 24' +4+B+ 8' " ' 8 2 " 8' 9+' B+ 9"38' 8+3' '+3 52 .' 9+' B+B"! +8' " ' 59 43!+ ' B 8' 2A+' "' 5" 8 3+!20 " '2 37+' B"43+3' 76' 9+8+' 25 "!8' 9+' 9 .8' @"! 9' !+B+B7+! .' B 8' 7+' 2 + 3+3' "' 76' 9+' 59 43' 2 3' 288"5 2 +3' @ 9' " 9+!'+J1+! + 5+8' '2' 868 +B2 5' @26' 9+' +B1928 8' 89" 43' 7+' " ' B+ 24' 25 D 6 " ' 9+' 12!' " ' 9+' 59 43' !+8 4 .' '"!.2 I2 " ' !2 9+!' 92 ' " ' B+!+' B1!+88 " ' !" 9' @ 9" ' 9+' D24 +' " ' 5"!!+0 42 " ' " ' 8 7-+5' B2 +!' 9+' ++3' " ' B+' "!' 288 B 42 " ' 2 3' !+"!.2 I2 " ' " ' 868 +B8' 28' @+44' 28' 9+' D2!6 .' B1"! 2 5+' 2' 3 +!+ '2.+8' " ' 9+' " 9+!' 25 "!8' 4 + 5 .' B+B"!6' 24' 233' "' 9+' 5"B14+J 6' " ' 9+' 1!"74+B' " ' +3 52 " ' ' 9+' +43

"8'8 3+ 8' " ' 23 4' 18659"4".6'2 3' 1!250 52446' 24' 8 3+ 8' " ' 59 43!+ '2.!++' 92 ' 9+' 9 .9+!' 1!"5+88+8' " ' 9 A .' 2 3' !+28" .' 2!+' " ' 9+' +J54 8 D+' 1"88+88 " ' " ' 9+' B2 !+' B 3' 7 ' 92 ' 59 43!+ ' 2 ' 4+28' 9"8+' " ' 859""4' 2.+' 248"' 8+' 9+B' 9+' 3 +!+ 5+' 7+ @++ ' 9+' @" 8'9" ' ' 9+' 278+ 5+' " ' 9+8+' 1!"5+88+8' 7 ' ' 9+' 255 !256' " ' 9+ !' B2 1 42 " ' 2 3' ' 9+' !+0 R + 56' @ 9' @9 59' 9+6' 2!+' 8+3' 9+' 250 5 !256' " ' 9+' !+8 4 8' " ' 9+' !+28" .' " '59 43!+ ' 8' 3 +' "' 8+D+!24' 52 8+8' +28" .' 2 3' 9 A0 .' !+R !+' 9+' 8+' " ' !+42 " 89 18' B+2 .8' 2 3' - 3.B+ 8' 28' @+44' 28' ++4 .8' " ' 5" 5!+ +' +J1+! + 5+8' 9+8+' B+ 24' 8 2 +8' 2!+' 9+' !+0 8 4' " ' .!"@ 9' 2 3' +J1+! + 5+' 2 3' 9+ !' B0 7+!' 3+ + +88' 2 3' 255 !256' @ 44' 5" 3 " ' 9+' 9 A .' 1"@+!' " ' 9+' 59 43' 25A .' 5+!0 2 ' A "@4+3.+' " ' !+42 " 89 18' "!' B+2 .8' 9!" .9'425A' " ' +J1+! + 5+' 9+' 59 43L8' 9 A .' B 8' 7+' 255 !2 +' 3+81 +' 9+' 1!+8+ 5+' " ' 9+' +5+882!6' +59 R +' 9+' 592!25 +! 8 58' " ' 9 8' 2 + " ' 2 3' B+B"!6' 248"' 9+41' "' +J142 ' 9+' 255 !256' " ' !+8 4 8' @9+ ' 9+' !+28" 8' ' !+28" .' 2 3' 9 A .' " +' B 8' "44"@' 5" 0 8 8 + 46'2 3' 54"8+46' 2' !2 ' " ' !+42 +3' 9" .9 8' 9 8' !+R !+8' 1"@+!' " ' 5" 5+ !2 " ' " ' 2 + 0 " ' 2 3' "!.2 I2 " ' " ' 25 8' 9+' 59 43' 425A8' 27 4 6' ' 7" 9' 4 +8' 8' B 3' @2 3+!8' !"B' 9+' 1!"74+B' 7+52 8+' " ' 425A' " ' 2 + " ' "!' 9+' .+ 8' 8 3+ !25A+3' 7+52 8+' " ' 425A' " ' "!.2 I20 " ? ' + 9+!' 528+' 2' @!" .' 5" 54 8 " ' B26' 7+' 9+' !+8 4 ' 8' 425A' " ' 8A 44' ' 8 .' 42 . 2.+' 8' 248"' 2' 3!2@725A' "!' 9+' B 8' 8+' 86B7"48' " ' 5" 5!+ +' B2.+!6' ' B 59' " ' 9 8' !+28" .' 9+' 25 ' 92 ' 9+' " + ' + 38' "' 8+' 9+' 5" 5!+ +' @9"4+' 8 +23' " ' 9+' +88+ 24' !+42 " 89 1' "!' 281+5 ' !+8 4 8' ' 9+' !+28" .' 76' 2 24".6' @9 59' 8' 2' 592!25 +! 8 5' " ' BB2 !+' B 38' 9 8' 1"@+!' "' 9 A' ' +!B8' " ' 12! 8' "!' +4+0 B+ 8' "!' 281+5 8' " ' 2' 8 2 " ' 8' 5" 3 " +3' 76' 9+' 59 43L8' 27 4 6' "' 2 246I+' "@+!' "' 2 246I+' 8' 2' 42 +!' 3+D+4"1B+ ' 92 ' 1"@+!' "' 288"5 2 +' 2 3' 5"B+8' " 46' @ 9' B 59' 1!25 5+' 9+' 25 ' 92 ' 9+' 23 4' !+28" 8' B"!+' " + ' 92 ' 9+' 59 43' 8' 1!"72746' " ' 3 +' 8"' B 59' "' 2' 3 0 +!+ 5+' '1"@+!' 28' "' 2' 3 +!+ 5+' ' 9+' 3+0 B2 38' B23+' 1" '9 B' 8'+ D !" B+ '3"+8' " ' + 5" !2.+' 9+' 59 43' "' !+28" ' "!' 8 2446' "' !+81" 8 7 4 6' 8' 244"@+3' "' !+8' 1" ' 9 B' ' 25 ' 9+' .+ 8' " ' B 59' B"!+' 5"B "! 2746' @9+ '9+' 3"+8' " ' 2 +B1 ' "' 9 A' "!' 9 B8+4 ' 7 ' 8 B146' 3"+8' 2 3' 7+4 +D+8' @92 ' 9+' 8' "43 ' 9+' !+5+1 D+' 8 7B 88 D+' 2 3+' 8' 9+' " +' 5" 8 3+!+3' "' 7+' 592!25 +! 8 5' " ' 9+' 59 43' B 3' 2 3' 9+ 5+' +D+!6 9 .' 8' 2!!2 .+3' "' + 5" !2.+' 9+' 23 4' 9!"@ ' " '9 8' "@ ' !+81" 8 7 4 6' "!5+3' 76' 5 !5 B8 2 5+8' "' 2A+' 9+' 2 D+' !+28" 8' B"!+' !+R + 46' 7 ' +D+' 9+' !+2446' 9 A8' 7 ' 8+43"B' 2 3' 9+ ' " 46' @9+ ' 9+' 8' "!5+3' "' 3"' 8"' 76' 9+' 1!+88 !+' " '8"B+' 1!"74+B' @9"8+' 8"4 " ' 8' D 24' "' 9 8' @+447+ .' 9+' 7!"23+!' 2 3' 9+' B"!+' 868 +B2 I+3' 9 8' 1+!5+1C 24' +J1+! + 5+8' 9+' .!+2 +!' 9 8' 5" !"4' " ' 9+' 9 .9+!' B+ 24' 8 2 +8' 2 3' 42 . 2.+' 9+' .!+2 +!' 9 8' 1"@+!' " ' 2 + " ' 9+' .!+2 +!' 9 8' 1!25 5+' '3+24 .' @ 9' 1!"74+B8' 1+! + " "' 9 8' +D+!6C 326' 4 +' 9+' .!+2 +!' @ 44' 7+' 9+' 59 43L8' 1"@+!' " ' !+28" .' 2 3' !+28" .' @+44' 3 52 " ' 92 ' 8' 3+ +46' 142 +3' "' 3"' 8"' 52 ' 2 3' 3+D+4"1C B+ ' 24" .' +259' " ' 9+8+' 4 +8

9+' +B" " 24' 4 +' " ' 9+' 59 43' 3 +!8' 7



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9+ B+ 2 8 3+ 92D+ . D+ 2 8 !" . B1 48+ " 9+ 8 36 " 59 43!+ 2 3 !+8 4 +3 9+ 25C 5 B 42 " " " 2 42!.+ B288 " "!B2 " " " .!+2 +!" "!4+88 85 + 5 2 3 1!25 52 D2 + 8 A "@4+3.+ " B+ 2 3+D+4"1B+ 928 C 5!+28+3 59 43 8 36 928 7+5"B+ 3 +!+ 2 +3 " @" 7!2 59+8 " A "@4+3.+ 9 43 36 2 3 + + 5 8659"4".6 :" "& 9+ 42 +! !+1!+8+ 8 9+ 7!"23+!" 2 3 B"!+ 85 + 5 1928+ " 9+ 8 7-+5 2 3 54 3+8 2 5" 8 3+!2C " " " 9+ 3+D+4"1B+ " " B 3 2 B248 2 3 9+ 9 B2 !25+ @9 4+ 9+ "!B+!" 9" .9 " 3+3 " 9+ 82B+ 1! 5 14+8 28 9+ 42 +! 8 4 B +3 " 9+ 5" 8 3+!2 " " " 9+ 3+D+4"1B+ " " 9 B2 7+ .8 !"B 2 56 " B2 ! 6 9 43 8 36 928 24@268 54 3+3 2 8 36 " 1968 524 3+D+4"1B+ 2 3 8 9+ A "@4C +3.+ " 9+ 59 43L8 1968 "4". 524 3+D+4"1B+ 92 9+ B"8 3+ +! !+8 4 8 92D+ 7++ 2 C 2 +3 9+ +2!4 +!4+23+!8 59 43 8 36 9+ 9!++ 7+8 A "@ 2!+ 9+ "44"@ .0 2!@ :" "& .42 3 @9" "78+!D+3 9 8 C 2 8" @ 9 9+ 82B+ +!+8 2 3 255 !256 92 9+ 89"@+3 8 36 .142 8 2 3 2 B248 !+6+! +!B2 6 @9" @ 9 9+ !2 .! 2 85 + 5 1968 "4". 8 2 3 18659"4". 8 1!+12!+3 2 @"ED"4 B+ 8 36 " 9+ !8 ;'6+2!8L 3+D+4"1C B+ " '9 8 7"6F 2 3 2 4+6 2 B+! 52 @9" 928 3 !+5 +3 +J + 8 D+ 8 2 8 524 8 3 +8 " 59 43!+ 2 3 928 8 B 42 +3 " 9+!8 " @"!A 1"1 42!2 3 85 + 5 59 43 8 36 7" 9 B+! 52 2 3 " 8"B+ +J + " 9+! 5" ! +8 " + B+ 2 @2D+ " 1"1 42! +!+8 81!+23 "D+! 9+ 5" !6 2 3 B2 6 4"524 2 3 8 2 + 59 43 8 36 8"5 + +8 @+!+ "!B+3 2 3 2 .!+2 D2! + 6 " " 4 +8 1!+12!+3 "! 9+ 8 36 " 59 43!+ 76 +259+!8 2 3 12!+ 8 "! 1!25 524 2 3 85 + 5 1 !1"8+8 2 6 " 9+8+ 8"5 +C +8 92D+ 5+28+3 "+J 8 2 3 8 "@ .+ +!2446 !+5". I+3 92 12!+ 8 2 3 +259+!8 52 " 7+ +J1+5 +3 " B2A+ 85 + 5 D+8 .2 " 8 7 92 9+6 52 1!" .!+2 46 76 9+ !+8+2!59+8 " 85 + 8 8 2 3 9+6 B26 @ 9 1!"1+!3 !+5 " 5"44+5 32 2 " D24 + " 81+5 24 8 8 4 9" .9 9+ 8"5 + +8 3 !+5 46 5" 5"+! +3 1!"B" 9+ 8 36 " 59 43!+ 2!+ 4+88 B+!" 8 92 "!B+!46 9+ +!+8 59 43!+ 28 59 43!+ 2 3 " 8 B146 28 !+ 23 4 8 8 B 59 .!+2 +! 92 +D+!7+ "!+ 9 8 8 8 ! A .46 3 52 +3 76 9+ 25 92 @9+!+28 2 85"!+ " 6+2!8 2." 8 "! +8 @9 59 59 43!+ @+!+ 9+ 59 + 592!25C +!8 @+!+ 24B "8 A "@ 1"1 42!B2.2I +8 "! 23 4 8 9+6 2!+ "@ 3 24B "8 +D+!6 88 + 9+ 8 7-+5 " 59 43 8 36 8 "@ 2 12! " 9+ 5" !8+ " 8 36 +D+!6 1!".!+88 D+ C 8 " + .2.+3 9+ !2 . " +259+!8 968 "4". 8 8 2 3 18659"4". 8 8 2!+ 248 +!C +8 +3 8 36 . 59 43!+ 28 2 B+2 8 " 3+C D+4"1 . 2 B"!+ 5"B14+ + A "@4+3.+ " 9+ ! 12! 5 42!85 + 5+8 +3 52 " 24 23B 8C !2 " 2 3 8"5 "4".6 1!"74+B8 " 59 439""3 2!+ "@ !+5+ D . 2 .!+2 3+24 " 2 + " 9 43 427"!5"B1 48"!6 +3 52 " ! 2 56 3+4 R + 56 1426.!" 38 3+ +5 8 3+ 5 + 5 +8 2 3 27 "!B24 +8 " 59 43!+ - D+ 4+ 5" ! 8 9+24 9 B"D+B+ 8 + 5 244 7! . " 9+ "!+C .!" 3 9+ B1"! 2 5+ " B"!+ 9"!" .9 A "@4C +3.+ " 59 43 2 !+2 3 9+ 5" 3 " 8 2D"! . "!B24 9+24 9 4 3+D+4"1B+ 9+ +3 52 " 24 9+"! +8 92 9+41+3 "8 2! 59 43 8 36 D+8 .2 " 8 92D+ 7++ 3+D+4"1+3 " 2 B"!+ 3+ +7"36 " A "@4+3.+ @9 59 8 .!+2 46 B"3 ;3 . 9+ 85 + 5+ 2 3 2! " +3 52C " 9+ "43 3+2 92 59 43!+ 2!+ " 7+ !+2 +3 28 3+D+4"1+3 23 4 8 2 3 92 9+6 89" 43 7+ B23+ " 23 4 8 244 9+ ! 592!25C +! 8 58 28 8"" 28 1"88 74+ 928 . D+ 1425+ " 9+ +8 274 89+3 25 92 59 43!+ 2!+ 3 +!+ 244 9+ ! 1968 524 2 3 B+ 24 592!25 +! 8 58 !"B 23 4 8 9+ .+ +!24 I2 " 8 " 59 43 8 36 92D+ B2/ +! 2446 B"3 +3 5" !8+8 " 8 36 2 3 B+ 9"38 " +259 . 9+ A 3 2 3 2B" " @"!A H " 7+ 3" + 928 7++ B"3 +3 8" 28 " 5" "!B B"!+ 54"8+46 " 9+ 59 43L8 2 !24 +!+8 8 2 3 27 4 6 2 3 +!+ 2.+8 2 3 B"!+ +B1928 8 928 7++ 1425+3 1" 9+ 59 43L8 1968 524 B+ 24 2 3 B"!24 3+D+4"1B+ 2 +259 2.+ 2 3 4+88 1" 9+ 25R 8 " " A "@4C +3.+ 2 3 8A 44 8 +3 " 23 4 4 + + 9"38 ? 8 36 . 59 43!+ " + "! B"!+ 59 43!+ B26 7+ 8 3 +3 + 8 D+46 9!" .9 2 4" .!+1+ "3 " B 8" 28 " 3+ +!C B + 9+ 592 .+8 92 2A+ 1425+ @ 9 5!+28+3 2.+ "!2 42!.+ B7+!" 59 43!+ " 3 +!+ 2.+8 B26 7+ 5"B12!+3 76 B+2 8 " B+28 !+C B+ 8 2 3 +8 8 2 3 9+ 5"B B" 592!25 +! 8 58 " +259 2.+ 3+ +!B +3 8 2 8 52446 + 9+! B+ 9"3 24" + 8 8 5 + +259 8 114+B+ 8 2 3 5"!!+5 8 9+ " 9+! " 9+ 3 5 4 +8 2 + 3 .2 18659"4". 524 D+8 .2 " 8 2!+ 233+3 B2 6 " 9+!8 @9+ 59 43!+ 2!+ 9+ 8 7C -+5 8 7 2 .25 8 76 B+2 8 " 78+!C D2 " 12!+ 8 92D+ 9+ 7+8 "11"! 6 " "78+!D+ 59 43!+ 9+ !D2! " 8 B"38 3+! "!B24 5 !5 B8 2 5+8 7 9+ "78+!D2 " 8 " 12!+ 8 2!+ 4 A+46 " 7+ 425A . 3+ + +88 2 3 255 !256 1+5 24 8 8 B26 B2A+ B"!+ 255 !2 + "78+!D2 " 7 9+ ! "11"! +8 2!+ " 8" ."3 2 3 B 59 B+ 8 !+R !+3 "!9+ 59 43 " 7+5"B+ 8+3 " 9+ 8 !2 .+ "7C 8+!D+! 8 36 . 59 43!+ 76 B+2 8 " +8 8 2 3 +J1+! B+ 8 4 A+ 3 4 5 3 +8 211+2! 9 43!+ 2!+ 8" 8 . .+8 74+ 2 3 8" +28 46 9!"@ " 2D"!274+ 2 3+8 76 9+ +@ 8 2C " 2 3 9+ 3+B2 3 92 9+6 "44"@ 3 !+5C " 8 92 !+8 4 8 D2!6 .!+2 4D @ 9 +259 .!" 1 @ 9 D2!6 . 5" 3 " 8 2 3 @ 9 9+ 1+!8" 24 6 " 9+ D+8 .2 "! D+ 1968 524 B+28 !+B+ 8 8 59 28 3+ +!B 2 " " 59+8 +J12 8 " D2!6 .!+2 46 @ 9 9+/2B" 2 3 A 3 " 18659"4". 524 8 B 4 8 . D+ 76 9+ " + B2A . 9+ B+28 !+B+ 8 " 8 3 +8 52!! +3 " 76 B+2 8 " 42 . 2.+ 52 7+ B23+ 9+ 528+ " D+!6 6" . 59 43!+ 2 3 +D+ @ 9 "43+!" +8 9+ 592 5+8 " 3+!8 2 3 . @92 8 @2 +3 2 3 " +J25 2 3 23+R 2 + +J1!+88 " " 9+ 12! " 9+ 59 43!+ 2!+ B 59 .!+2 +! @9+!+ 42 . 2.+ 8 D"4D+3 92 9+ 528+ " 23 4 8 + 5+ 9+ :) B+ 9"3 B 8 7+ 8+3 @ 9 .!+2 52!+

9+ 8 55+88 D+ 592 .+8 !"B 2 4+ 592!0 25 +! "" 9"8+ " 59 439""3 6" 9 2 3 B2 9""3 2!+ " @9"446 9+ !+8 4 " +J +! 2 4 + 5+8 7 3+1+ 3 1" +! 2 + 30 + 5 +8 @9 59 4+23 "" 3+D+4"1B+ 2 5+!0 2 @26 " 46 84 .9 46 4+88 +D 274+ 92 92 76 @9 59 2 .!2 " 5"! 3+D+4"18 7423+8 8 24A 288+4 8 4A 2 3 +2!+ 9+ "!3+! 2B+3 !2 9+! 92 2 !+D+!8+ "!3+! : 8 @92 9+ "!3+!" 3+D+4"1B+ 2 59 43 8 2 3 9"@ 2! 5"!!+81" 38 "" 9+ "!3+! @9 59 9+ !25+ 928 3+D+4"1+3 928 " 28 6+ 7++ 3+ +!B +3 3+ 2 4 M ++ *& * + 4 + +!24 +8 4 8 ?9+ 59 43 928 8"" B2 6 V592!25 +! 8 58 8"B+ " @9 59 592 .+ 2 " + B+ 2 3 8"B+ 2 2 " 9+! 92 8 3 4 5 4 "" 8 BB2! I+ 54+2!46 9+ 59 + 25 8 ")9 8 3+0 D+4"1B+ 968 52446 9+ 59 43 .!"@8 D+!6 !21 346 2 !8 9+ !"B 27" P "" $Q 2 2 +2!46 "!B !2 + 9 8 8 "44"@+3 76 2 1+! "3 " 255+4+!2 +3 .!"@ 9 @9 59 2 +! @"" "! 9!++ 6+2!8 3+5!+28+8 .!23 2446 44 B2 ! 6 8 !+259+3 9+ 1+! "3 " B"!+ !21 3 .!"@ 9 8 " 9+ 82B+ "!9+ .9 28 "!@+ .9 2 3 8 " 9+ 82B+ "!" +12! " 9+ 7"36 28 "! 2 " 9+! M ++ - (4 B"D+B+ 8 9+ 59 + 592 .+ 8 " B7+! 7 3+ +0 +88 255 !256 5"B14+J 6 2 3 5""!3 2 " " B2 6 12! 8 " 9+ 7"36 "! 81+5 5 + 38 + 4+J 2 3 8 5 D+ B"D+B+ 8 2!+ !+1425+3 76 927 24 B"D+B+ 8 2 3 !2 3"B B"D+0 B+ 8 76 81+5 5 D"4 2!6 25 8 " 85 " 8 +88 8 2 !8 2 "78+!D+! !2 9+! 92 2 3 !+5 "! " 7+92D "! 2 3 " 46 .!23 2446 3"" 9+ 3 +!+ B+ 24 8 2 +8 7+5"B+ 54+2!46 3+ +3 9+ 8 5 D+ +B" " 8 2!+ +2!46 3 +!+ 2 +3 2 3 42 +! 9+ 8+ B+ 8 2!+ 3+D+4"1+3 44 "!B8 " +44+5 24 3+D+4"10 B+ 2A+ 1425+ 2 " 5+ 7 1+!5+1 " " 9 .8 1!+8+ 8 B"8 1!"B + "! 9+ !8 &6+2!8 9+ B2. 2 " "" 9 .8 " 1!+8+ 2 3 2446 5" 5+1 24 9 A . 25R ! . 9+ 1"@+!" "" .2 3+8 !+3 + 38 9+!+ 8/24@268 89"@ 2 .!+2 3+24 B"!+ 25 D 6 92 8 +5+80 82!6 2 3 " 46 .!23 2446 2!+ 89"! E5 B+ 9"38 " 3" . 9 .8 25R !+3 9+8+ B1!"D+3 B+ 9"38 3+D+4"1 42!.+46 2 +.2 D+ @26 9!" .9 3!"11 . " " B"D+B+ 8 2 3 2 0 + D+ 25 8 @9 59 3"" " 4+23 "" 9+ + 3 3+8 !+3 2 +! 1"8 D+ 3+D+4"1B+ 2A+8 1425+ 9!" .9 5" 85 " 8 2 3 D"4 2!6 +B192 8 8 1" 9+ B"!+ 23D2 2.+" 8 B"D+B+ 8 2 3 76 B 2 " 9+ !2 8 " !"B 1426 "" @"!A !"B !++ @28 + 4 84 .9 46 3 !+5 +3 25 D 6 "" !+8 ! 5 +3 +5" "B 524 3 !+5 " " 25 D 6 "" 9+ 2 2 B+ " 2 + 3 .2B+8 @9 59 2!+ 14+28 !274+ 7 @9 59 !+R !+ 9+ 3 !+5 " " 25 D 6 255"!3 . "" ! 4+8 2!+ 2 B1"! 2 25 "!

9+ +2!46 6+2!8 +2!46 244 9+ 4+2! . " 9+ 2 8 76 9+ B+ 9"3" ! 24 2 3 8 55+88 @9 4+ 9+ 59 43 9+ +J 8 2.+ B2A+8 9 8 B"8 !21 3 1!".!+88 9!" .9 9+ B"!+ +5" "B 0 524 B+ 9"3 " B 2 " 9+ 8+ " @9 59 9+ 1!" 8 76 9+ +J1+! + 5+ " " 9+!8 +!

9+ 59 43 928 4+2! +3 2 42 . 2.+ 2 3 2 2 +3 2 5" 8 3+!274+ 3+.!++ " !+1!+8+ 2 D+ 2 3 5" 5+1 24 3+D+4"1B+ 9+ !+23 46 4+2! 8 76 9+ 3+2 " 24 B+ 9"3 @92 9+ 52 " 4+2! 76 +J1+! + 5+ "! 76 "78+!D2 " " " 9+!8 9+ B"8 5" 81 5 " 8 3+ +5 " B+ 9"3 244 859""48 @9 59 59 43 8 36 8 5"!!+5 . 8 92 " "" +2!46 2 3 "" .!+2 +B1928 8 1" 9+ 3+2 " 24 B+ 9"3 " 4+2! .

9+ 4 .9 " 9+ .+ +!24 ! 98 24!+236 +8 274 89+3 8 82 + "" 5" 54 3+ 92 9+ 1+!0 8" @9"" 928 9+ 592!25 +! 8 58 " +259 2.+ @+44 7!" .9 " @ 44 4 B2 +46 2 2 2 9 .9+! 61+ " 23 4 9""3 92 " + @9"" 8 B23+ "" 2A+ " 28 !21 346 28 1"88 74+ 23 4 592!25 +! 8 58

968 524 + +5 8 ?9+ 8 36" 59 43!+ 928 +8 274 89+3 D+!6 54+2!46 9+ ! 9 92 1968 524 2 3 B+ 24 3+D+4"1B+ 2!+ 54"8+46 5"!!+42 +3 2 3 92 1968 524 3+ +5 8 +81+5 2446 " 5+! 2 A 38 2!+ 8"B+ B+8 B"!+ 4 + 24 92 244 9+ B+ 24 4 + 5+8 92 52 7+ 7!" .9 "" 7+2! 1" 9+ 59 43 8 3+ !"B .+ +!24 44 9+24 9 9+ 1968 524 3+ 5 + 5 +8 92 B"8 !+0 R + 46 !+ 2!3 "!1!+D+ 9+ "!B24 B+ 24 3+D+4"1B+ " 59 43!+ 2!+ +!D" 8 +88 8+ 8+ 3+ +5 8 2 3 23+ " 38 MZ a G 9+ +!D" 8 59 43 8 .+ +!24 425A . 1"@+! "5" !"4 9 8 B"D+B+ 8 2 3 9 8 9" .9 8 2 3 +B" " 8 8 !+81" 8+8 "8+ 8"!6 2 3 +B" " 24 8 B 4 2!+ +J5+88 D+ 8"" 92 9+ 8 +28 46 B23+ "" - B1 42 .9 "!5!6 + 2 . +8 +28 46 12! 46 7+52 8+ 9+ . D+8 " B"!+ + +!.6 92 8 +5+882!6 2 3 12! 46 7+52 8+ 9+ 928 4 4+ "! "" !+8+!D+ + +!.6 9+ 2 . +3 9 8 +!D" 8 +88 5!+28+8 59 43 @9"" 8 !+8 4+88 7+ "!+ !+5+88 2 3 R + 2 +! D ."!" 8 1426 8 " +!D" 8 @9 4+ 9+ " +@9"" 8 B"!+ 3.+ 6 2 +! !+5+88 1!"72746 8 +!D" 8 "B+ B+8 2 59 43 @9"" 8 8 B146 425A . +!D" 8 "!5+ 89"@8 "8 . " +!D" 8 +88 49+ 8 2 . +3 + " 9+ B"8 5"B B" 2 3 3 8 !7 ."!B8 " +!D" 8 +88 8 2446 A "@ 28 (8L8 2 5+ #:" "& 8 1!"1+!46 !+2 +3 " 8+! " 8 8 + +5 8 1" B+ 4 3+D+4"1B+ 8 B 43+!" "!B 9+!+ 2!+ 8 B146 !!+. 42! @ 59 . 8 " " . + 4 18 25 24 B 854+8 "!" .+!8 @9 4+ B"!+ 8+! " 8 528+8 9+!+ B26 7+ D "4+ -+!A . 2 3 @ 59 . 244 12! 8 " 9+ 7"36 9+ 3 8+28+ 8 5"B B" 1! B2!6 2 3 +!B+3 2 + .!23+8 2 3 8 +80 1+5 2446 5"B B" !+R + 9+ 81! . 2 3 " + 428 27" > @++A8 9+ 59 + !+B+36 8 28 5"B0 14+ +!+8 28 1"88 74+ @ 9 " ! 89 . ""3 2 3 " ! .9 "!" @"!!6 @92 +D+! 9"B+ 5" 3 0 " 8 2!+ 2 244 2D"!274+ 9+ 59 43 89" 43 +D+! 7+ 859""4 "!" 9 8 "@ ."" 3 2 3 8 44 B"!+ "!" 9+ ."" 3 " 9+ 859""4 7+52 8+ 244 "!B8 " +!D" 8 +88 2!+ 28 52 59 .28 2 6 +5 " 8 3 8+28+ 2B B+! . 2 9+8 2 56 81++59 2 3 8 +! . 2 3 !!+. 42! 6 9+ 25 " " 9+ D"524 "!.2 8 B26 7+ !+.2!3+3 28 "!B8 " +!D" 8 +88 9+!+ 8 425A " 5""!3 2 " 9+ D2! " 8 B 854+8 D"4D+3 81++59 2 3

8"B+ B+8 8128B"3 +5" !25 " 5 " 8"B+5 " 5 9+B 9+5" 3 " 8 5!+28+3 76 +J5 +C B+ "!5 8+4 E5" 85 " 8 +88 9+ 5+5 9+8+5 89" 43 7+5. 2!3+3 2.2 8 28 B 59 28 1"88 74+ .C .2 3 5" 5+! !+1+ " 2!+5 9+41 4 7 8+D+!+5 528+8 6 +43 " 46 "5 81+5 24 !+2 B+ 76 2 +J1+! 3+ " 38 2!+5 B"!+5 "!5 4+88 27C "!B24.!"@ 98 2 9+5 725A 12! " 9+5 "8+5 @9+!+5 "1+ 8 "5 9+5 9!"2 92 12! 46 2 3 8"B+ B+8 @9"446 54"8+5 9+5 "1+ .8 8"5 92 7!+2 9 .B 8 7+5 52!! +3 " @9"446 "!5 12! 9!" .9 9+5 B" 9 9 8 8 2 D+!6 5"B B" 3 8+28+5 +81+5 2446 9+5 1! B2!6.!23+8 9" .9 " 2 + 3+3 "5 9+ 9+5 8+D+!+!5 528+8 @ 44 7+5 " 3 9 .9+!5.!23+8 8 +88+ 2446 2 59 43!+ 8 3 8+28+5 28 9+5.!"@ 98 3!6 1 2 3 2 !"196 B"8 528+8 7+ "!+5 B2 ! 6 8 !+259+3 9+5 + +5 8 " 23+ " 38 B26 9"@C +D+!428 244 9!" .9 4 + + 8+5 3+ +5 8 " 2 6 A 3 1425+5 2 59 43 2 2 3 823D2 2.+2 3 4+88 9+5 8 274+5 81 +5 " 9 8 92 3 521 "5 A++1 1 @ 9 9 8 B2 +8 859""4 "!5 9+5 !8 6+2!5 "!5 @"5 9+6 1!"3 5+5 5!+28 .!+ 2!32 " 9+5 " 9+!5 92 3 9+5 8 274+5 "5 25R !+5 9+5 82B+5 A "@4+3.+5 28 " 9+!5 59 43!+ 3 ! .5 9+5 !8 @"5 "!5 9!++5 6+2!8 9+5 8 4 A+46 "5 1!".!+88 28 @+44 28 "!B24 59 43!+ 2 +!5 92 9 8 8 @96 59 43!+ @ 9 8+ 8+5 3+ +5 8 +81+5 2446 2 3 "!6 2!+5 " + + 9+!5 D+!6 725A@2!3 "!5 D+!6 7! .9 +!5 2 59 43 928 .2 +3 2 2 !46 255 !2 +5 1+!5+1 D+5 A "@4+3.+" 9 .8 2 3 928 25R !+3 2 2 3 C "!6 2 3 D 8 24 42 . 2.+9 8 ! 9+!5 B+ 24 3+D+4"1B+ 52 1!"5++3 R +5 @+44 +D+ 9" .9 9+5 8+ 8+5 "!.2 8 2!+5 3+ +5 D+ 8 3+5 !"B 9+5 92 3 521 B2 24 2 3 +44+5 24 25 D +8 52 8+3 76 8+ 8+5 3+ +5 8 9+6 B26 8+! " 846 2 +5 2 59 43L8 9+24 9 "!5 9 8 592!25 +!5 9+5 !8 B"!+5 " + !+8 4 8 !"B 3+ +5 8 8.9 2 3 9+5 8+5" 3 !"B 3+ +5 8 9+2! . 9+5 59 43 52 8++7 " 46 76 2 B 59.!+2 +!5 + "! 92 "!B24 59 43!+ 9+23259+ +!C D" 8 +88 2 3 " 9+!5 3 8"!3+!8 !+R + 46 !+8 4 9+5 59 43 @9"5 52 " 9+2!5 @+44 8 !+R + 46 B 8- 3.+3 76 9+5 +259+!5 2 3 !+2 +3 @268 92 !+ 3+!5 9 B 3 +!+ 8 1 3 8 44+ "!5 !+8+ 4 8 R +8 2746 2 25 92 +D+ 9+5 7!.9 +8 2 3 B"8 "78+!D2 +259+!5 9+5 5" !8+5 " "!3 2!6 859""4 H@"!A @9+!+5 9+!5 2 + " 8 3 !+5 +3 "@2!3 +44+5 24 !2 9+!5 92 8+ 8"!6 25 D +8 " 59 43!+ B26 2 4 "5 3 85"D+!5 D+!6 1!" 5+3 8+ 8+5 3+ +5 8 59 2 +259+!5 2 3 248"5 " 9+!8 4+88 25 +5 52 9"@+D+!5 76 B2A .5 2 81+5 24 +8 " 5 9+5 5" C 3 " 5 " 5 8+ 8+5 "!.2 8 5 +28 46 3 85"D+!5 244 9+5 8+! 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D+5 9+B 9+ !5 32B+ 24 592!25 +! 8 58 2 3 3+ +!B +5 "5 2 5" 8 3+!274+5 +J + 5 +259 8 2.+5 " 5 9+ !5 3+D+4"1B+ 9 43!+ "92D+5 244 9+5 61+8 " 8 5 8 5"B C B" 5 "5 2 B248 5 24" .5@ 9 2 B7+!5 " 5 " 9+!8 92 5 2! r + 9+!5 278+ 5 "!5 " 5 89.9 5 B1"! 2 5+5 2 B248 4"@+!5 9+5 8524+5 92 5 B2 5 9+8+5 8 5 8 B26 7+5 .!" 1+3 28 "44"@8 " 5 9+5 728 8 " 5 8+5 M$G +4 E1!+8+!D2 D+5 "!5 3 D 3E 298 5 8 5 8 5 @9 59 54 3+5 244 2 D+5 + 3+ 5 +8 "5 25 " 5 92 5 5" ! 7 +5 1! B2! 46 "5 9+5 1!+8+!D2 " 5 " 5 9+5 3 D 3 24 9+8+5 2!+5 5" 5+! +3 +81+5 2446 @ 9 M2G ++3 .5 "!5 .+ .5 2 3 2A .5 " 5 ""3 M&G +2! .5 "!5 2D" 3C .5 2 3 +8521 .5 32 .+!5 2 3 M5G .9 .5 "!5 8 ! ..4 .5@ 9 5+ +B +8 "!5 B2 +8 "!5 8 1!+B256 5 MQG !" 1 5 "!5 12!+ 24 8 5 8 5 @9 59 B1+4 "5 25 8 76 @9 59 9+5 81+5 +8 8 1!"12.2 +3 2 3 1!+8+!D+3 9+8+5 !+5 89"@ 5 5 @"5 "!B80 M2G 25 8 5" +5 +3 @ 9 9+5 1!"3 5 " 5 " 5 6" .5 2 3 M7G 52! .5 "!5 9+B 3 ! .5 2 4" .+!5 "!5 2 89"! +!5 1+! "3 M;G !" 1 5 "!5 8"5 24 C 8 5 8 5 @9 59 54 3+5 25 " 8 92 5 + 3 1! C B2! 46 "5 9+5 1!+8+!D2 " 5 " 5 9+5 .!" 1 "5 @9 59 9+5 3 D 3 24 7+4" .8 5 M=G 321 D+5 8 5 8 5 @9 59 B1+4 9+5 3 D 3 24 "5 25 " 8 92 5 3+D+4"1 9 B 5 "!5 !+25 .5 8 55+88 446 "5 @92 +D+!8 2 " 8 9+5 B26 B++ 9+5 59 + 5 @268 5 @9 59 8 5 8 " 5 9 8 61+5 B2 +8 5 9+B8+4D+8 2!+5 5 9+5 "!B5 " 5 M2G 1426 M7G B C 2 " 5 M5G 5 ! "8 6 5 MPGa +. 42 D+5 8 5 8 5 @9"8+5 5 " 5 8 5 "5 3"B 2 +5 2 3 92!B" !+5 25 " 5 8"5 92 5 !+25 " 8 89244 7+5 4+)5 1!"B1 5 2 3 B"!+5 5" 8 8 + 5 9+8+5 8 5 8 5 5 C 8 5 8 5 9+6 7+5 M 9+ !5 8 5 D+5 592!25 +!5 8 3 81 +3G 2!+5 B2 +8 +3 5 @"5 1! 5 124 "!B8 5 M2G B"!24 2 3 M7G !+4 . " 8 B1 48+8 5 9+5 !8 5 B1+44 .5 "5 25 " 5 5 92!B" 6 @ 9 " 9+!5 1+!8" 8 2 3 9+5 8+5" 3 "5 25 8 5 92!B" 6 @ 9 2 8 1+! 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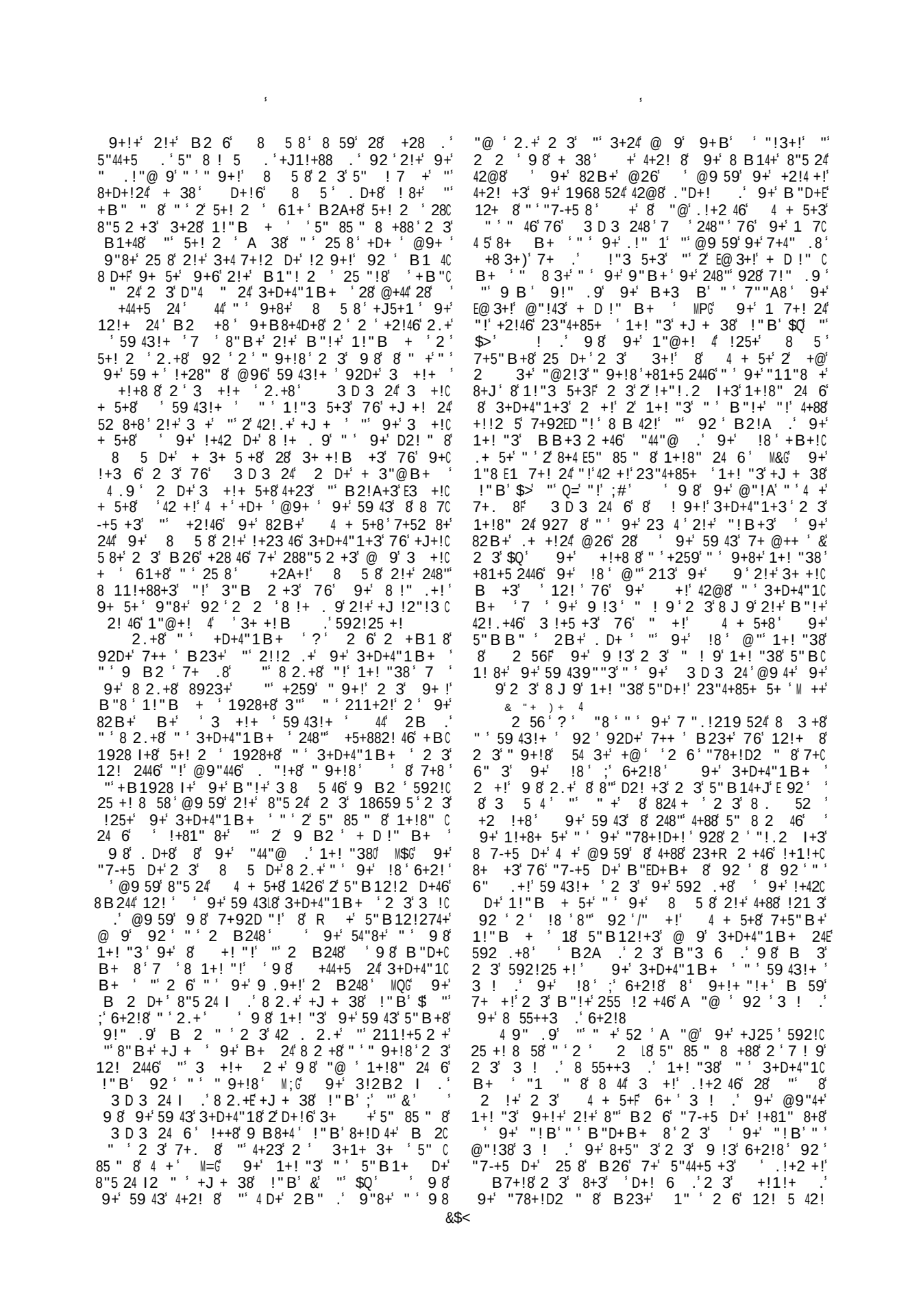


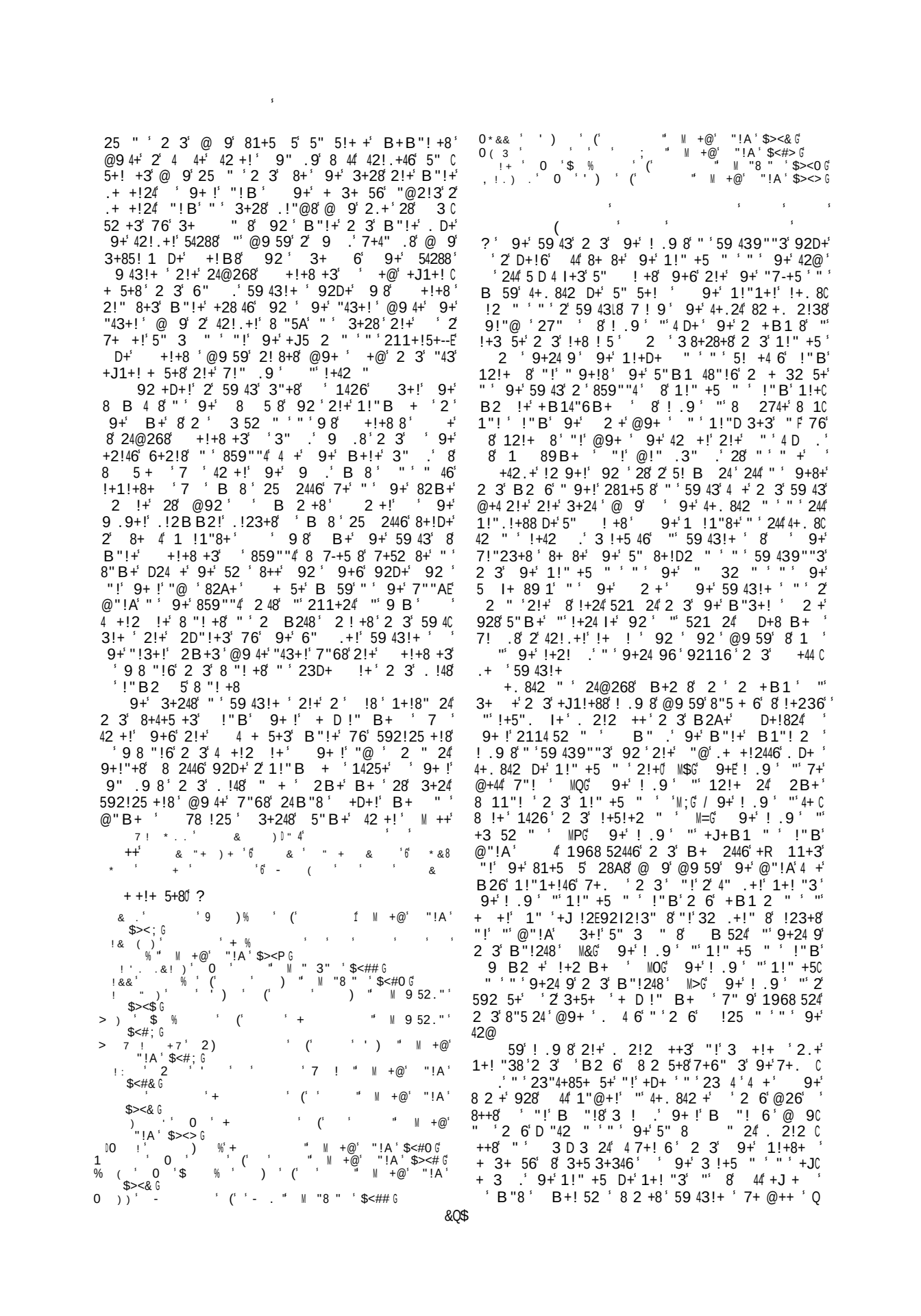
59 43 9+ "78+!D2 " 8 9 8 2! B23+ 3 C 52 + 92 5" 85 " 8 +88 14268 4 4+ 12! 3 !+5 . 9+ 59 43!8 25 D +8 3 ! . 9+ !8 9!++ B" 98 8 B"D+B+ 8 2!+ 24B"8 @9"446 " 3 !+ 4+J 8 5 D+ "! 592 5+ 592!C 25 +! 3 ! . 9 8 1+! "3 2 3 " 46 +2! 8 54"8+ 928 9+ 2 2 +3 8 5 + 5" !"4 "D+! 9 8 9+23 2 3 +6+8 " 7+ 274+ " 4""A 2 9 .8 ! . 9+ +J R 2! +! 6+2! 9+ "7 2 8 5" C 8 3+!274+ 5" !"4 "D+! 9 8 92 38 8" 92 9+ 52 !+259 "! 9 .8 2 3 -+!A 9+B 27" 9+ 9 !3 R 2! +! 6+2! 9+ 8 274+ " B"D+ 9 8 @9"4+ 7"36 76 5!++1 . 9 59 . 24" . !"44 . "D+! 2 3 "D+! 2 3 8"B+ B+8 76 @24A . @9 4+ 9"43 . " 8"B+ 9 . 9+ 428 R 2! +! " 9+ !8 6+2! 9+ " + 4+2! 8 " @24A 24" + 2 3 9+ 52 3" 2 .!+2 B2 6 9 .8 1!+C D " 846 B1"88 74+ " 9 B @ 9 2 5+! 2 6 2 3 255 !256 92 .!23 2446 5!+28+ 9+ B"8 8 . 52 592 .+ 8 " 9"@+D+! 2 6 " + A 3 " B"D+B+ 7 9+ 27 4 6 9+ .2 8 " 8+ B2 6 12! 8 " 9+ 7"36 8 59 2 @26 28 " 255"B14 89 "@ " + + 3 2 3 "@ 2 " 9+!

9+ 9 .9+! 54288+8 " 8 5 8 2!+ 1!+8+ " " 46 2 84 .9 +J + 3 ! . 9+ !8 6+2! 7 B2 6 " 9+B 7+5"B+ 1!"B + 7+ "!+ 9+ 54"8+ " 9+ 9 !3 6+2! 9+ 59 43 7+5"B+8 1426 4 2 3 5 ! " 8 76 9+ B 334+ " 9+ !8 6+2! 2 3 D+!6 B 2 D+ +2! 8 54"8+ 9+ 8"5 24 8 5 3+D+4"18 !21 346 3 ! . 9+ 8+5" 3 2 3 9 !3 6+2!8 2 3 54"8+ 288"5 2 " @ 9 9+ +J1!+88 D+ 8 5 9+ 59 43 3+! 9+ 4 + 5+ " 9+8+ @" 8 5 8 2 3 " 9+ B 2 D+ + 3+ 56 @9 59 8 "@ 3"B C 2 !21 346 4+2! 8 " 25 ++4 9 A 2 3 81+2A 4 A+ 9"8+ 2!" 3 9 B " 1+! "3 8 9+ 9 B2 + D !" B+ 8" 4 + 24 3+ +!C B . 9+ 3 !+5 " " 8 5 D+ 3+D+4"1B+ E 2 3 B"43 . B 3 2 3 592!25 +!

; 6+2!8 " 2.+ 9+ 2 928 7+5"B+ 2 9 B2 1+!8" 24 6 @ 9 5" 8 3+!274+ 1"@+! " 8+4 E3 !+5 " 2 3 @ 9 8"B+ 3 D 3 24 6 + 211+2!8 " 92D+ 2 5" 85 " 8 +88 " B+ 24 8+4D+8 2 3 " 9 8 "@ 28 3 8 5 !"B " 9+!8 9 8 8 3 52 +3 76 9+ 5"!!+5 8+ " 1!"C " 8 2 3 D2! " 8 " 9+! @268 9 8 3+C D+4"1B+ " " 8+4 E5" 85 " 8 +88 928 7++ 2 .!23 24 " + 8 5"!+ "! 725A.! 3 8 "!B+3 76 M2G 2 !46 5" 8 2 7"3 46 8+ 82 " 8 5" C !28 +3 @ 9 9+ B"!+ D2! 274+ 81+5 24 8+ 82C " 8 M&G 1+!8 8 . 927 8 " !+25 . 2 3 M5G B+B"! +8 28 5" !28 +3 @ 9 1!+8+ 8 !C !" 3 .8 2 3 25 D +8 +! 9+ 928 4+2! +3 " 3 8 . 89 9 8 "@ 7"36 !"B " 9+! 9 .8 8 8"B+ B+ 7+ "!+ 9+ 3 8 . 89+8 7+ @++ 9 8 B+ 24 8 2 +8 2 3 9"8+ " " 9+!8 + 24 8 2 +8 2!+ " 9 B 5"B B" " 9 B8+4 2 3 " 9+!8 9 8 1+! "3 " 5"B B " 5" 85 " 8 +88 @9 59 9+ 892!+8 @ 9 " 9+!8 244 9+ !+J1+! C + 5+8 2 3 @9 59 9+ @ 89+8 9+B " 892!+ 24 92 9+ 1+!5+ D+8 8 3 52 +3 M2G 76 9 8 B 2 " 8 MPG 76 9 8 8 8 + 5+ 1" 9+ !8++C . 2 3 9+2! . @92 9+ 8++8 2 3 9+2!8 2 3 M5G 76 9 8 3+8 !+ "! 9+ ! 5" !B2 " " 9+

@"!38 9+ 8+8 2 3 1!+5+3+8 9+ 3+D+4"1B+ " 8+4 E5" 85 " 8 +88 @9 59 9+!+ 8 5" C 85 " 8 +88 " 9+ 25 92 9 8 B+ 24 8 2 +8 2!+ 12! 2 4+28 " 892!+3 76 " 9+!8 9 439""3 ? (+!6 9 4+ 928 7++ 3" + 9+ @26 " 8 36 . 59 43!+ 7+ @++ ; 2 3 & 6+2!8 " 2.+ 2 868 +B2 5 "! 85 + 5 @26 2 6 +!+8 . 2 3 2B 8 . 9 .8 !+.2!3 . 59 43!+ " 9 8 2.+ 2!+ !+1"! +3 7 7+6" 3 9+ 25 92 8 2 1+! "3 3 ! . @9 59 3 D 3 24 6 3+D+4"18 !21 346 +@ .+ +!24 8 2 +B+ 8 2!+ - 8 +3 76 9+ 25 8 92 92D+ 7++ 5"44+5 +3 9+ 528+ 8 R + 3 +!+ "! +4+B+ 2!6 859""4 59 43!+ " 9+ 2.+8 !"B & " $= 9+6 92D+ 7++ @+ .9+3 B+28 !+3 +8 +3 2 3 R +8 " +3 .!+2 B7+!8 2 3 2 D2! + 6 " @268 255"!3 . " B+ 9"38 92 2!+ B"!+ "! 4+88 85 + 5 8 " 1"88 74+ 9"@+D+! " 8 2 + 7! + "!B 2 3 @ 9 255 !256 9+ .+ +!24 !+8 4 8 " 8 59 8 3 +8 "8 " 9+ 8 3 +8 92D+ 7++ B288 !2 9+! 92 3 D 3 24 8 3 +8 2 3 233 " " 9+ 25 92 3 D 3 248 3 +! .!+2 46 !2 + 2 3 "!3+! 3+D+4"1B+ 9+ 82B+ 8 !C !" 3 .8 2 3 9+ 25 92 81+5 24 +J +! 24 4 + 5+8 .!+2 46 B"3 6 3+D+4"1B+ 9+!+ 8 8 44 B 59 5+! 2 6 28 " 9"@ 2! 9+ 81+5 24 B+28 !+B+ 8 +8 8 2 3 R ! +8 92D+ 7++ 1!"1+!46 B23+ 2 3 1!"1+!46 B23+ 9"@ 2! 9+ !+8 4 8 3 52 + 2 61 524 3+D+4"1 B+ 9+!+ 8 2 .!23 24 B1!"D+B+ 3 85! B 2C " B" "! 5" !"4 !2 + " 1968 524 2 3 B+ 24 25 D 6 B+ 24 .!281 2 3 B+B"!6 8 B1"88 74+ " 826 9"@ B 59 " 9 8 BC 1!"D+B+ 8 3 + 5 3+ 24 1!25 5+ 3" . 9+ 9 .8 92 2!+ +8 +3 "! 9"8+ 92 2!+ 8 B 42! 9+ 5 !D+8 "7 2 +3 !"B 8 59 8 3 +8 2!+ 8 2446 !!+. 42! 2 3 244 +J1+! C B+ 24 8 3 +8 28 @+44 28 " 9+! "!B8 " 8 2 8 524 D+8 .2 " 8 9+!+ 2!+ D+!6 1!"C " 5+3 D2! 2 " 8 2 27" $Q 6+2!8 " 2.+ 9 8 3 52 +8 92 +! 24 3+D+4"1B+ 24 592 .+8 2!+ 2 9 8 2.+ .!+2 + " .9 " B"3 6 9"8+ 3 + " +J +! 24 4 + 5+8 2 3 92 8"B+ 4 +8 9+ @" 2!+ "11"8 " 2 3 " 9+!8 92!B" 6 9+ 1968 524 2 3 B+ 24 592 .+8 3 ! . 9+ +J +@ 6+2!8 2!+ B+!" 8 2 3 1!" " 3 7 8 B1"88 74+ !"B 9+ 8 2 8 524 32 2 2 92 3 " "!B 42 + 255 !2 + 8 2 +B+ 8 " 9+ 2B" 2 3 592!25 +! " 9+ 18659 524 592 .+8 9+!+ 2!+ 84 .9 8+J 3 +!+ 5+8 89"@ 244 +8 8 2 +2!46 244 2.+8 4 +2! 9+ ++ 8 @9+ 9+ 3 +!+ 5+8 7+C 5"B+ D+!6 B2!A+3 @92 +J + 9+8+ 3 +!+ 5+8 2!+ 3 + 3!+88 "55 12 " 2 3 81+5 24 +259 .52 " 7+ 3+ +!B +3 7 !"B 9 8 B+ " 9+ 59 43!+ !21 346 3+D+4"1 B28C 5 4 + 2 3 +B 592!25 +! 8 58

2 6 8 3 +8 728+3 " "78+!D2 " 8 2 3 2 8@+!8 " R +8 " 8 2 42!. 1!"1"! " " @9 59 9!"@ 4 .9 1" 59 43!+ 8 52125 +8 +!+8 8 2 3 3+248 2 3 +!+ 2.+8 92D+ 7++ B23+ 211+2!8 92 9+ 3+28 " 8B244 59 43!+ 2!+ 5" 5+! +3 59 + 46 @ 9 8+ 2 3



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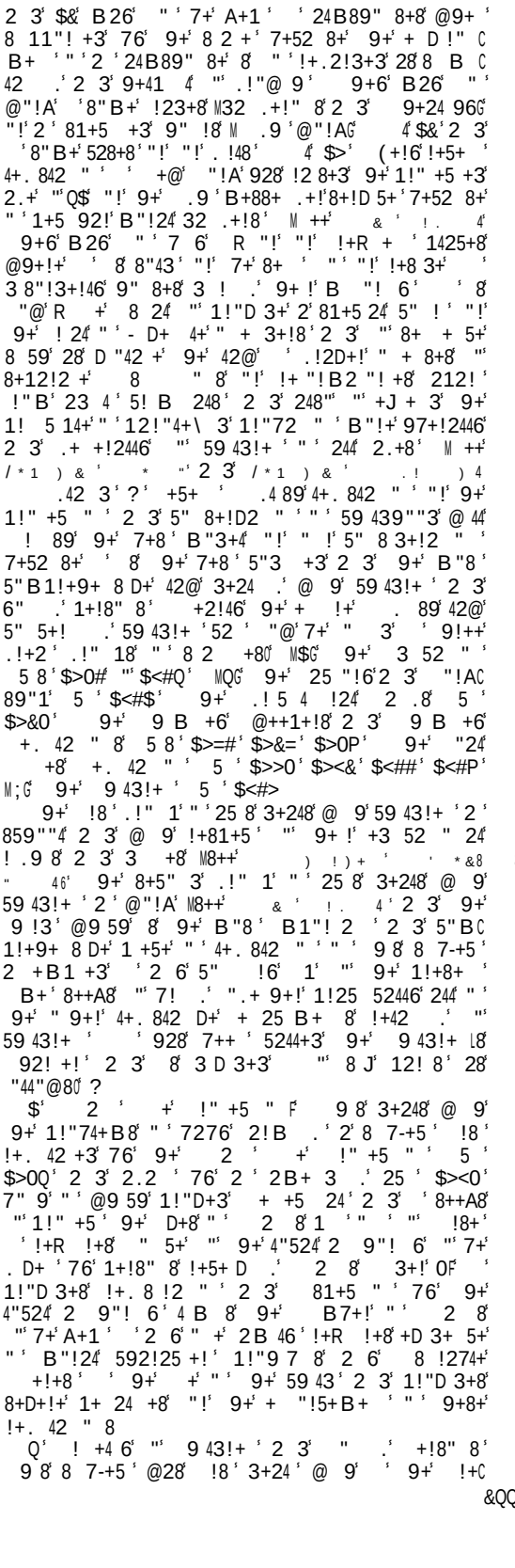

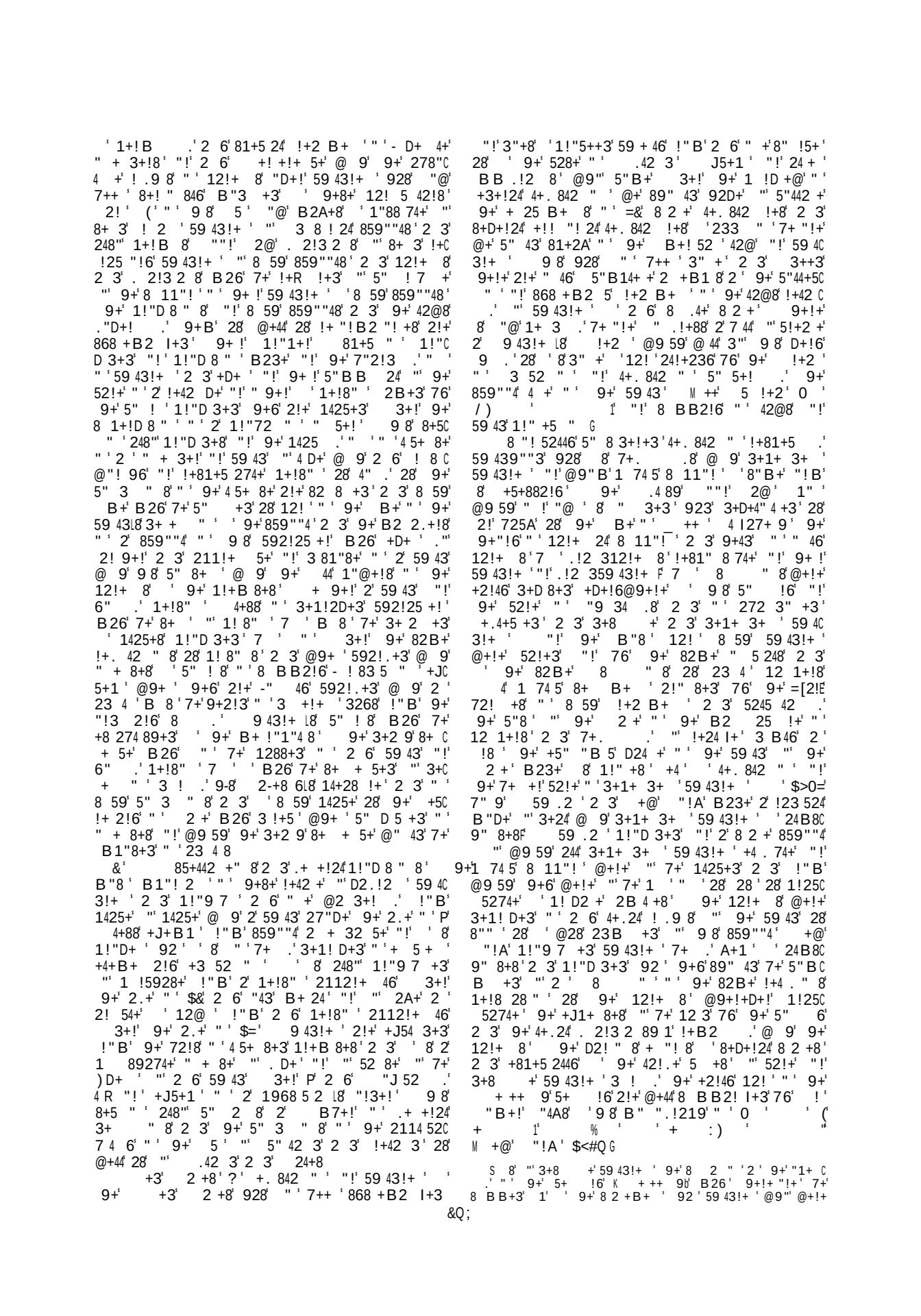

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9+ 9 + " 8+ " +!+ 5+ " 9+ 52!+ " 3+1+ 3+ 59 43!+ @9 59 B+ :2 2!6 $<#< 23"1 +3 2 B" 846 !+8"4 " 8 @9 59 .2D+ 9+ 7!"23+8 1"88 74+ 85"1+ "+.4+. 842 " 2 3 !.+3 8 59 28 @" 43 7! .27" !+D+ C D+ @"!A 92D . D +@ 9+!+3 5 " " 9+ B7+!" 3+1+ 3+ 59 43!+ 28 @+44 28 9+ !+2 B+ 2 3 52!+ B1928 8 @28 1425+3 & 9+ 3+8 !27 4 6 " !+R ! . 5"!1"!2 " 5" C 3 " +3 " 9+ 211!"D24 " 2 8 2 + 7"2!3 " 592! +8 " 244 54 43E52! .2.+ 5 +8 2 3 "!C 7 33 . 2 " 9+! 92 3 46 5"!1"!2 +3 2.+ 5 +8 " + .2.+ 9+ 52!+ " ++36 59 4C 3!+ 9+8+ !+8"4 " 8 248 5" 2 +3 9+ "44"@ .8 2 +B+ 80 C 9+ 1!"1+! !2 . " 3+8 + 59 43!+ 7+ .+88+ 24 " 9+ @+44C 7+ . " 9+ 8 2 + 8 2 8" 3 1 74 5 1"4 56 92 9+ 8 2 + 9!" .9 8 3 46 2 9"! I+3 !+1!+8+ 2 D+8 89" 43 81+5 9+ @"!A " 244 2.+ 5 +8 @9 59 52!+ "! 3+1+ 3+ 59 43!+ @9+ 9+! 76 8 " 24 "! 76 9"B+ 3 . B+ 9"38 2 3 @9+ 9+! 8 11"! +3 76 1 74 5 "! 1! D2 + 38 "!3+! 92 9 8 +3 52 " B26 7+ +R 24 " 92 2 "!3+3 76 9+ 859""48 2 + 3+3 76 9+ " 9+! 59 43!+ " " 9+ 5"BC B 6 8 3+8 !+3 92 9+ +3 52 " " 59 4C 3!+ "!192 2864 B8 2 3 9+! 8 B 42! C 8 " 8 "! 9"8+ 1425+3 2B 4 +8 89" 43 7+ 3+! 9+ 8 1+!D 8 " " 9+ +3 52 " 24 2 C 9"! +8 " 9+ 8 2 + T D+!6 59 43E52! . 2.+ 56 89" 43 S +J+!5 8+ 8 1+!D 8 " "D+! 59 4C 3!+ 3+! 9+ ! 52!+ 4 8 59 59 43!+ 2!+ 4+.2446 23"1 +3 2!+ !+ ! +3 " 9+ ! 12!+ 8 2 2 9+ ! B2-"! 6 "!2!+ 54+2!46 7+6" 3 9+ ++3 " ! 9+! 8 1+!D 8 " + .!+2 46 3+1!+52 + 9+ + 3+ 56 " 4+. 842 " 8"B+ 8 2 +8 " 1425+ +5+882!6 "78 254+8 9+ @26 " 1425 . 59 43!+ 2B 46 9"B+8 8 59 8 2 +8 76 2.+ 5 +8 @9"8+ 9+23R 2! +!8 2!+ +48+@9+!+ D +@" 9+ 25 92 @+ 2D"! 9+ 52!+ " 3+8 + 59 43!+ "!B24 B 3 2 3 7"36 2B 4 +8 @9+ +D+!1!25 5274+ T 9+ 27"D+ R " 2 " 8 !"B 9+ +8"4 " 8 " 9+ 42!.+8 7"36 " +J1+! 8 59 43 52! .@"!A +D+! 288+B74+3 9 8 5" !6 7!" .9 ".+ 9+! 76 9+ D 2 " " 9+ !+8 3+ " 9+ +3 2 +8 9" .9 @ 9" 5 24 !+5". " "! 2 9"! 6 @ 44 8+!D+ " 3 52 +! 1+8+ + 3C + 5 +8 1 74 5 "1 " 2 3 " 1" "R 9+ 592!25 +! " 9+ 4+. 842 " @9 59 928 24!+236 7++ 923 9+ B"!+ 23D2 5+3 8 2 +8 " 9+ "

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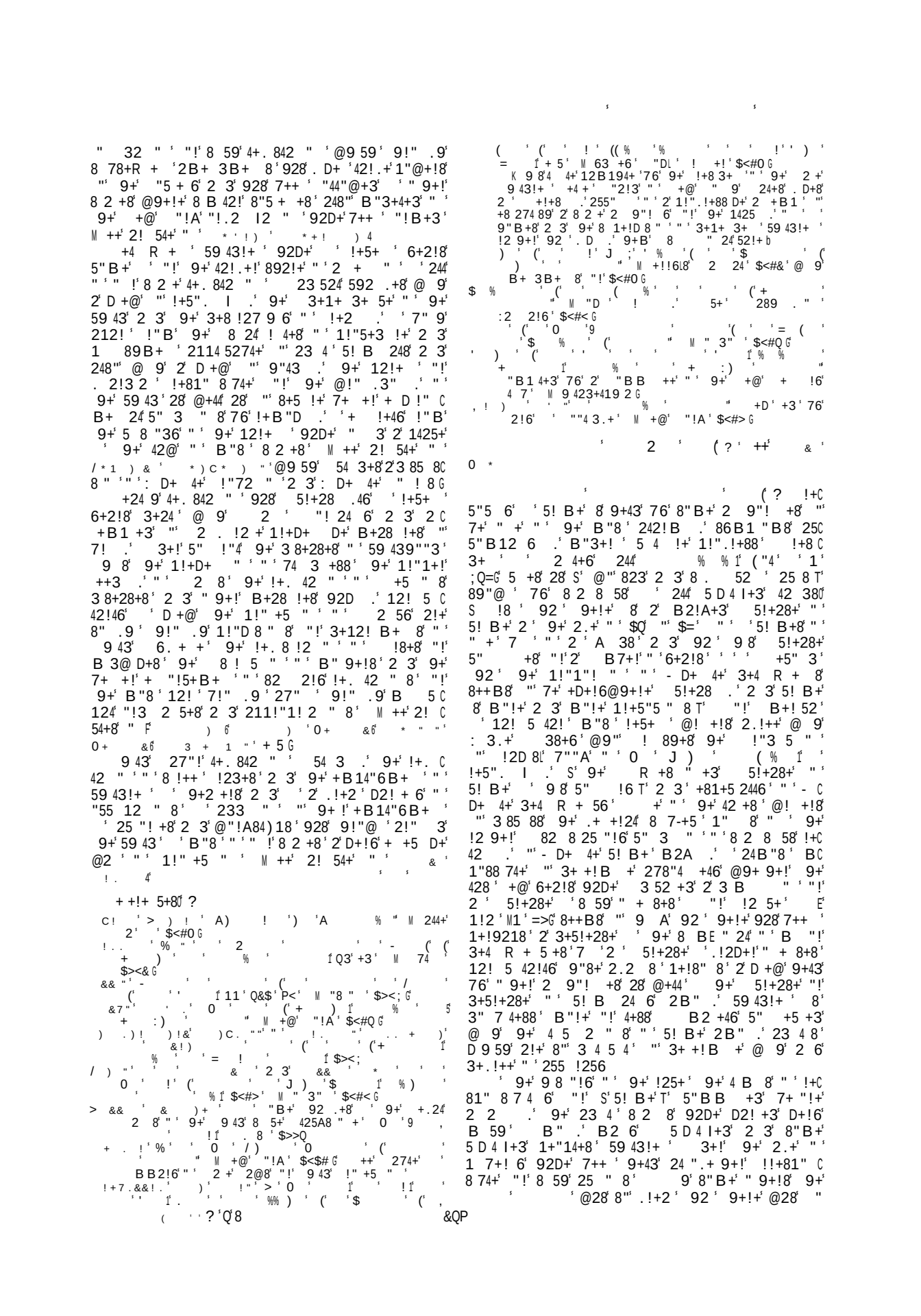

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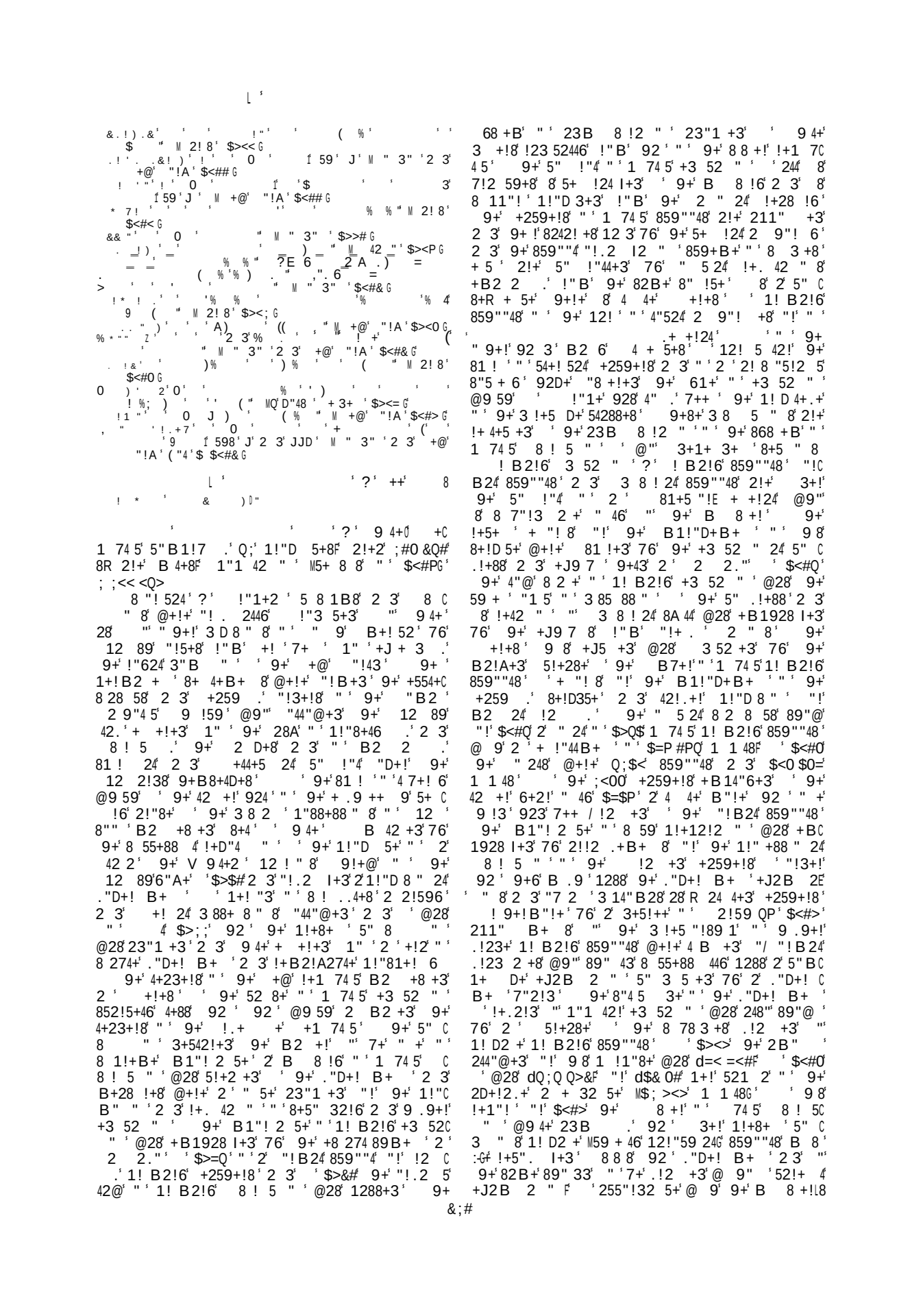
"Gʻ 59 43!+ L8ʻ 2 3ʻ - D+ 4+ʻ 5" ! 8ʻ #:" "& ʻ 8+D+!24ʻ "ʻ 9+ʻ 8 2 +8ʻ "ʻ 9+ʻ " ʻ+ 274+ʻ 9+Bʻ "ʻ 3+24ʻ ʻ+ !+46ʻ 81+5 24ʻ 289 " ʻ@ 9ʻ 59 43!+ ʻ 3+!ʻ $Qʻ 2 3ʻ " + ʻ 1ʻ "ʻ 9+ʻ 2.+ʻ "ʻ $&ʻ 2 3ʻ 2ʻ 5"B B" ʻ!+5". " ʻ"ʻ $=ʻ 28ʻ 8 59ʻ 2ʻ 4 B ʻ8++B8ʻ "ʻ 7+ʻ @+44ʻ 3+!ʻ @26ʻ "B+ʻ "ʻ 9+8+ʻ 1!"C D 8 " 8ʻ 9"@+D+!ʻ 2!+ʻ "ʻ R +ʻ !+5+ ʻ "! . ʻ 28ʻ B26ʻ 7+ʻ 8++ ʻ !"Bʻ 9+ʻ 9 8 "!6ʻ "ʻ 5! B+8ʻ 2 3ʻ 9+ !ʻ 1 89B+ ʻ ʻ .42 3ʻ ʻ 9+ʻ + .9 ++ 9ʻ 5+ !6ʻ "ʻ 826ʻ " 9 .ʻ "ʻ " 9+!ʻ 5 D 4 I+3ʻ 42 38ʻ 9+!+ʻ 8ʻ " 5+274+ʻ 2 ʻ +D 3+ ʻ + 3+ 56ʻ "ʻ !2 8+ʻ 9+ʻ 2.+ʻ 4 B ʻ 4ʻ ʻ5" 5 3+8ʻ B"!+ʻ +2!46ʻ @ 9ʻ 25 24ʻ B+ 24ʻ 3 D 3 24ʻ !+81" 8 7 4 6ʻ "ʻ 2ʻ 54+2!46ʻ 3+B" 8 !274+ʻ A 3 ! B 24 6ʻ ʻ59 43!+ ʻ 8ʻ 2ʻ 1+!14+J .ʻ 1!"7C 4+Bʻ "!ʻ 9+ʻ 85 + 5ʻ @"!43ʻ "ʻ 9+ʻ @+ + 9ʻ 5+ !6ʻ 28ʻ ʻ@28ʻ "!ʻ 9+ʻ 1!+5+3 .ʻ 2.+8ʻ "ʻ 9 B2 ʻ B+ 24ʻ +D"4 " ʻ+J+B14 +3ʻ ʻ 9+ʻ ʻ 3+D+4"1B+ ʻ "ʻ ʻ 9+ʻ 5"B14+J +8ʻ "ʻ B"3+!ʻ !72 ʻ2 3ʻ! !24ʻ4 +ʻ 9+ʻ3 5 4 6ʻ "ʻ255" C .ʻ "!ʻ ʻ 8ʻ +D 3+ ʻ@9+ 9+!ʻ " +ʻ4""A8ʻ "ʻ 9+ʻ "4A4"!+ʻ "ʻ 9+ʻ 8 7-+5 ʻ !+1!+8+ .ʻ 9+ʻ B"!+ʻ "!ʻ 4+88ʻ 2 D+ʻ +J1+! + 5+8ʻ "ʻ 9+ʻ B288ʻ "ʻ B2 C A 3ʻ ʻ.+ +!24ʻ "!ʻ +J2B +8ʻ 9+ʻ !+5"!38ʻ "ʻ 8 2 8 58ʻ 2 3ʻ 9+ʻ !+8 4 8ʻ "ʻ 85 + 5ʻ D+8 C .2 " 8ʻ ʻ 9+ʻ B"8ʻ 5 D 4 I+3ʻ 5" ! +8ʻ " ʻ 9+ʻ .4"7+ 9+ʻ "43ʻ 9+"4". 524ʻ 3"5 ! +8ʻ "ʻ Sʻ"! . 24ʻ 8 Tʻ Sʻ " 24ʻ 3+1!2D 6 Tʻ Sʻ 2 ʻ32B 2 " Tʻ + 5 ʻ " 3ʻ 4 4+ʻ 3 5 4 6ʻ ʻ255" .ʻ "!ʻ 9+ʻ 5! B 24ʻ 281+5 8ʻ 2 3ʻ 1+!D+!8 +8ʻ "ʻ 59 439""3ʻ "!ʻ ʻ288 . .ʻ "ʻ 9+Bʻ .ʻ !+7 A+ʻ 2 3ʻ 21C 1!"1! 2 +ʻ 5928 8+B+ ʻ ʻ9 B2 ʻ 7+ .8ʻ 28ʻ 2ʻ !+8 4ʻ "ʻ 9+ʻ Sʻ8 ʻ "ʻ 32B Tʻ @+!+ʻ Sʻ7"! ʻ "ʻ B+!+46ʻ 5"!! 1 ʻ 7 ʻ ʻ 2ʻ 8 2 +ʻ "ʻ 8 ʻ . 4ʻ 2 3ʻ 4 27 4 6ʻ "ʻ 1 89B+ Tʻ ʻ 9 8)ʻ 728 8ʻ ʻ @28ʻ +286ʻ "ʻ +J142 ʻ 2 6ʻ 2 E8"5 24ʻ + 3+ 5 +8ʻ 2 3ʻ 2 6ʻ +D 4EB 3+3 +88ʻ @92 8"C +D+!ʻ" ʻ 9+ʻ12! ʻ"ʻ59 43!+ ʻ 9+ʻ Sʻ"43ʻ 32Bʻ Tʻ ʻ 9+Bʻ 2 3ʻ ʻ 9+ !ʻ 12!+ 8ʻ 255" +3ʻ "!ʻ 244ʻ Sʻ5! B+8 Tʻ 9+ʻ "78+88 " ʻ"ʻ +D+ ʻ D+!6ʻ 6" .ʻ 59 43!+ ʻ 76ʻ 2 2 ʻ 9 B8+4 ʻ "!ʻ 76ʻ 8"B+ʻ " ʻ 9 8ʻ B " 8ʻ @28ʻ 4" .ʻ 7+4 +D+3ʻ ʻ 2 3ʻ 9+ʻ !+C 8" !5+8ʻ "ʻ+J"!5 8Bʻ 2 3ʻ1 89B+ ʻ@+!+ʻ 2J+3 "ʻ 9+ʻ +!B"8ʻ "ʻ !+B"D+ʻ 9+ʻ +D 4 81 ! 8ʻ "!ʻ 5928 8+ʻ 9+ʻ 8 +!ʻ 9+ʻ 2!Aʻ .+8ʻ "ʻ 9! 8C 2 6ʻ @+!+ʻ 44+3ʻ @ 9ʻ 8 59ʻ 25 " 8ʻ "@2!3ʻ 59 43!+ ʻ 28ʻ 2!+ʻ "@ʻ 9211 46ʻ B1"88 74+ʻ ʻ+D+ ʻ 9+ʻ B"8ʻ 725A@2!3ʻ "ʻ 5 D 4 I+3ʻ 42 38ʻ 2 3ʻ 28ʻ +D+!ʻ "55 !!+3ʻ ʻ 2 ʻ 1!"727 4 6ʻ ʻ 9+ʻ B"8ʻ 5 D 4 I+3 ! " 846ʻ+ " .9ʻ 9+8+ʻ 9+"4". 524ʻ3"5 ! +8ʻ 8"ʻ 5" 8 8 + ʻ @ 9ʻ 9+ʻ 81 ! ʻ"ʻ ! +ʻ!+4 . " ʻ 3ʻ 2ʻ 12!244+4ʻ ʻ 9+ʻ 9 8 "!6ʻ "ʻ 9+ʻ +D"4 " ʻ "ʻ B"3+Bʻ 85 + 5ʻ 9" .9ʻ ʻ 9+ʻ1!"B + 5+ʻ . D+ ʻ 76ʻ 5+! 2 ʻ@! +!8ʻ 2 3ʻ D+8 .2 "!8ʻ "ʻ 9+ʻ 326ʻ "ʻ 9+ʻ 9+"! +8ʻ "ʻ Cʻ 2 2D 8B Tʻ 2 3ʻ S !+521 42 " Tʻ 92 ʻ ʻ 9+ʻ +J !+B+ʻ "!B8ʻ ʻ@9 59ʻ 9+6ʻ 2!+ʻ 8"B+ B+8ʻ 8+ʻ "! 9ʻ 2!+ʻ 1"8C 8 746ʻ 28ʻ 2!ʻ !"Bʻ 7+ .ʻ 9"!" .946ʻ 85 + 5ʻ 28ʻ 9+ʻ 9+"4". 524ʻ 3"5 ! +8ʻ - 8ʻ !+ +!!+3ʻ "ʻ @+!+ʻ !"Bʻ 7+ .ʻ .+ +46ʻ !+4 . " 8ʻ " ʻ B 59ʻ 8ʻ .2 +3ʻ 76ʻ 8 78 .ʻ "!ʻ 9+ʻ 3 D 3 24ʻ 32Bʻ 2 3ʻ 9 8ʻ @+2A +88ʻ 2ʻ 1! B24ʻ 9 B2 ʻ !25+ʻ 1 44 C 42 .ʻ@ 9ʻ 27 "!B24ʻ "!ʻ 3+ +5 D+ʻ 1968 524ʻ 2 3ʻ 18659 524ʻ 592!25 +!8ʻ @9 59ʻ 8@2!Bʻ 1+! "3 52446ʻ ʻ 9+ʻ 7"3 +8ʻ 2 3ʻ B 38ʻ " ʻ 244ʻ 8ʻ 3 D 3 24ʻ 3+85+ 32 8 9+ʻ 4 +!2 !+ʻ " ʻ "4A4"!+ʻ 2 3ʻ 1!"D+!7ʻ 4+.+ 38ʻ 2 3ʻ " 9+!ʻ B2 +! 24ʻ 3 52 +ʻ 9"@ʻ 9+ʻ 426ʻ B 3ʻ " ʻ 9 B2 6ʻ 928ʻ @2D+!+3ʻ @ 9ʻ !+.2!3ʻ "ʻ 9+ʻ 52 8+ʻ 2 3ʻ 9+ʻ 5 !+ʻ " ʻ 5! B+ʻ Sʻ 2116ʻ 8ʻ 9+ʻ 59 43ʻ @9"8+ʻ 2 9+!ʻ @+ ʻ "ʻ 9+ʻ 3+D 4 Tʻ 8268ʻ " +ʻ .4 89ʻ 1!"D+!7F 2 3ʻ 9+ʻ 7+4 +ʻ 8ʻ 8 44ʻ @ 3+81!+23/ 92ʻ 9+ʻ 59 43ʻ " ʻ 2ʻ 54+!.6B2 ʻ ! 8ʻ +D+!6ʻ 592 5+ʻ " ʻ ! .ʻ " ʻ 723ʻ 9+ʻ D+8 .2 " 8ʻ " ʻ +443" ʻ 1!"D+ʻ 9"@ʻ 4 4+ʻ 9+!+ʻ !+2446ʻ 8ʻ ʻ 9+ʻ 9+"!6ʻ " ʻ54+! 58ʻ 3+.+ +!2 C .ʻ ʻ 9+ !ʻ 8" 8ʻ "!ʻ 9+ʻ 5" 59ʻ 826 .ʻ 92ʻ Sʻ 2ʻ 32 ʻ !8+ʻ B2A+8ʻ 2ʻ @ 8+ʻ @+2 Tʻ 9+!+ʻ 2!+ʻ "ʻ 5" D 5 .ʻ 8 2 8 58ʻ 9+ʻ Sʻ "4Aʻ Tʻ 928ʻ ʻ 8ʻ D2! " 8ʻ 7+4 + 8ʻ +!1!+ +3ʻ 9+!+3 6ʻ + " .9ʻ "ʻ 89"@ʻ 92ʻ ʻ 5" 43ʻ 7+ʻ "ʻ " E2 3E" ʻ 12!C 82 ʻ "ʻ Cʻ 2 2D 8Bʻ Tʻ "!ʻ Sʻ!+521 42 " ʻTʻ 1 !+ʻ 2 3ʻ 8 B14+ʻ 9+ʻ :212 +8+ʻ 1 ʻ 9+ʻ 528+ʻ "!ʻ + D !" B+ ʻ 28ʻ 8 !" +46ʻ 28ʻ 1"88 74+ʻ @9+ ʻ 9+6ʻ 826ʻ Sʻ+D+ ʻ 9+ʻ 84" +8ʻ ʻ 9+ʻ 8 !++ʻ 2!+ʻ 2.2 8ʻ 9+ʻ 59 43ʻ "ʻ 8+D+ Tʻ 3ʻ 9+ʻ 1+ 3 C 4 Bʻ "ʻ 9+ʻ 9" .9ʻ "ʻ "E326ʻ 8++B8ʻ 8@ . .ʻ 8 !" .46ʻ ʻ2ʻ 4 A+ʻ 3 !+5 "B+ʻ 2 9"! +8ʻ !+.2!3ʻ 9+ʻ Sʻ5! B+8ʻ Tʻ "ʻ 59 439""3ʻ 28ʻ 8 B146ʻ "!ʻ59 + 46ʻ Sʻ+J2..+!2 " 8ʻ "ʻ 9+ʻ 592!25 +!8ʻ @9 59ʻ ʻ2ʻ 4+88ʻ 3+.!++ʻ B2!Aʻ +2!46ʻ 24ʻ 59 43!+ Tʻ 2 3ʻ 5" 8 3+!ʻ 9+ʻ 59 43ʻ 28ʻ 7+ .ʻ Sʻ 2 !2446ʻ 76ʻ 9 8ʻ "!.2 I2 " ʻ +2!+!ʻ "ʻ 9+ʻ 2 B24ʻ "ʻ 9+ʻ 82D2.+ʻ "ʻ 9+ʻ 5! B 24ʻ 92 ʻ 9+ʻ 23 4ʻ>ʻ M 44 8ʻ 1ʻ Q$QGʻ 9+6ʻ !+5".C I+ʻ 2ʻ "!Bʻ "ʻ 5! B 24 6ʻ 24B"8ʻ 1+5 4 2!ʻ "ʻ 59 43!+ ʻ 89"@ .ʻ 8+4ʻ 7+ @++ ʻ 9+ʻ 2.+8ʻ "ʻ Pʻ 2 3ʻ $$ʻ 2 3ʻ 7+ .ʻ Sʻ592!25 +! I+3ʻ 76ʻ 2ʻ 5+! 2 ʻ +55+ ! 5 6ʻ "ʻ 592!25 +!ʻV2ʻ 3 84 A+ʻ "ʻ 2B 46ʻ 927 8ʻ 2 ʻ 52125 6ʻ "!ʻ +3 52 " ʻ2ʻ + 3+ 56ʻ "ʻ 46 .ʻ ".+ 9+!ʻ @ 9ʻ 28 + +88ʻ 2 3ʻ +J !2"!C 3 2!6ʻ 56 5 8Bʻ 723ʻ 8+J 24ʻ 927 8ʻ 2 3ʻ 5! +4 6ʻ "@2!3ʻ 2 B248ʻ 2 3ʻ 5"B12 " 8ʻ Tʻ M 44 8Gʻ 9ʻ 8"B+ʻ 59 43!+ ʻ 9+ʻ +J2..+!2 +3ʻ 211+2!C 2 5+ʻ " ʻ 9+8+ʻ 592!25 +!8ʻ 8ʻ " +3ʻ " 46ʻ ʻ5" C +5 " ʻ @ 9ʻ 9+ʻ 1 7+! 24ʻ 5! 8 8ʻ "ʻ @9 59ʻ 8"ʻ B 59ʻ B1"! 2 5+ʻ 928ʻ 7++ ʻ 2 259+3ʻ 76

2!!"' 244' 2 3' " 9+!' !+5+ ' 2 9"! +8' 2 3'
D+8 .2 "!8' !+8 3+ ' 244' 3++3' 8++B8'
@ 44 .' "' 255" ' "!' 8"B+' "' 9+' 1+5 4 2! +8'
" ' 592!25 +!' ' 59 43!+ ' 3+!' >' 76' 9+' 961" 9C
+8 8' " ' S' 2' 1!+9 8 "! 5' +2!46' M8+J 24G' ! 1+ +88'
' 8"B+' 1 . B" 3' 8 2 .+T' % % 1' ("4' '
1' $#;G' 9 8' B2A .' !25 24' 8+J' +J1+! + 5+' 2'
25 "!' 2 ' 9 8' +2!46' 8 2.+' ' 9+' 4 +' " ' 9+' C
3 D 3 24' 9+' 1!"" ' " ' 9 8 ' 9"@+D+!' 8' " '
"! 95"B .F' 2 3' 9+' 4+88' 8+J' 8' 211+24+3' "'
' +J142 2 " ' " ' 9+' 19+ "B+ 2' " ' 59 439""3' '
9+' 7+ +!' ?' 2 ' " 9+!' 1"88 74+' +!1!+ 2 " 8'
89" 43' 7+' 2 +B1 +3' !8 ' 2 6' " ' 9+' 8+J 24'
S' 5! B+8' T' " ' 59 439""3' 2!+' 3 +' "' 9+' C
4 + 5+' 2 3' 8 ..+8 " ' " ' 9+ !' +43+!8' M"43+!'
7!" 9+!8' 2 3' 8 8 +!8' 5"B12 " 8' !8+8'
12!+ 8' + 5 G' 2 3' 2!+' !2!+46' 2 D+46' 59 43 89'
"!' 59 434 A+

9+' +D2 +85+ ' 2 !+' 2 3' !2 8 + ' 592!C
25 +!' " ' B2 6' " ' 9+' S' 2 4 8 T' S'@!" .3" .8 T'
2 3' +D+ ' S' 5! B+8' T' " ' 59 43!+ ' 2!+' 3 52 +3'
76' 7" 9' 9+' D+!3 5 ' " ' "4A4"!+' 2 3' 9+' !+8 4 8'
" ' 85 + 5' R ! +8 ' "B+' " ' 9+' B+ 24'
2 3' B"!24' "74 R +8' 2 3' 27 "!B24 +8' 92 '
T' 2 4 5 'T' 9+' 59 43' 5"B+' 2 3' ."' 2112!C
+ 46' @ 9' "' B"!+' + +5 ' 1" ' 9+' 8 78+C
R + ' 4 +' " ' 9+' 3 D 3 24' B2 ' "!' @"B2 '
92 ' 92 ' +J+! +3' 76' 5+! 2 ' B+!+46' 1968 524'
2 3' 8"B2 5' 1+5 4 2! +8' " ' 2 ' +R 2446' +19+BC
+!24' 2 !+' ' 9 8' !2 8 + 56' 52 ' +28 46'
7+' B2. +3' 7+6" 3' 8' 1!"1+!' 85"1+' ' 8'
." .' "" ' 2!' " "1' "' 9"43 ' 28' 3"' 8"B+' !+5+ '
@! +!8' 92 ' +D+!6' 59 43' 1288+8' 9!" .9' 2'
S' 5! B 24' 8 2.+T' "!B24' "' ' 2 ' 92 ' 1+! "3'
" ' 3+D+4"1B+ ' ' 8' - 8 ' 28' 85 + 5' "'
5244' +D+!6' 59 43' 2' 5! B 24 ' 28' ' 8' "' 5244' +D+!6'
5! B 24' 2' 59 43 ' 9+' 12!244+4 ' " + ' 8+ ' 1'
7+ @++ ' / 9+' 59 43' 2 3' 9+' 5! B 24 ' 9" .9'
R +' 2A .' ' 1" 8 ' 8' !+2446' D+!6' + +5C
D+ ' 28' B 8 ' +5+882! 46' 7+' 244' 8 59' % ,
' ' @9 59 ' " +' 12! 6' 8' 2' .!"@ E 1' 2 3'
9+' " 9+!' 2' D+!6' 6")).' 9 B2 ' 7+ .' +!+'
1+!9218' B"!+' 92 ' 2 6@9+!+' +48+' ' 89" 43' 7+'
!+B+B7+!+3' 92 ' 2' 59 43' 8' 2' 59 43 ' 2 3' 2' B2 '
8' 2' B2 ' 3 4 9""3' 24@268' 7! .8 ' @ 9' '
8"B+ 9 .') ' 1' 2 3' 59 439""3' !+ 2 8'
"' 9+' + 3' 2' 5+! 2 ' 2 " "B6 " ' 8' "@
"' 3 8 . 89' 7+ @++ ' 9+8+' S' !2 8 + '
19+ "B+ 2 T' @9 59 ' ' 1288 .' 4+2D+' 9+'
59 43' 1!25 52446' "!B24 ' 2 3' 9"8+' " 9+!8 '
@9 59 ' 76' 9+ !' 1+!B2 + 5+' 2 3' + 8 6' 42 +!'
" ' 89"@' 9+B8+4D+8' "' 92D+' 7++ ' 7 4 ' 1' " '
2' !B' " 32 " ' "!' "' 92D+' 923' 8"B+' 5" C
8 2 46' 23D2 2.+" 8' ++3 .' .!" 3' 8' 76' "'
B+2 8' +286' ' 9+' 1!+8+ ' 5" 3 " ' " ' " !'
A "@4+3.+' " ' 9+' 52 8+8' 2 3' 9+' 8 B 4 ' " '
5! B+' ' 8' +286' "' 5" 8+' "!' +J2B14+
B"!7 3' B1 48+8' 2 3' 25 " 8" ' 23 4 8 '+J142 E'
274+' !"B' 2 ' 23 4 ' 18659"8 8 ' 2 3 ' 28' 2D+4"5A'
44 8' !+!12!A8' M1 ' Q$;G ' C' 1+!9218' B"!+' 54"8+46'
!+42 +3' "' 82 6' 92 ' "' 5! B 24 6 T' @ 9'
19+ "B+ 2' " ' 59 43' 4 +' 92D .' 2' 5+! 2 ' !+C
8+B742 5+' "' 9+B ' 2 3' +!1!+ ' 8 59' 28' C' BC
1 48+8' " ' +9 439""3' 1+!8 8 .' ' 2' B"!+' "!' 4+88'
8 73 +3' "!B' ' 23 4 ' 2.+ T' ' 23 4 ' @ 9
!+ + " ' " ' S' 59 43' B1 48+8' T' B 8 ' 9"@+D+!'
3 +!' !"B' " +' @9"8+' 5! B 24' + 3+ 5 +8' 2 3'
25 " 8' 2!+' B" D2 +3' 76' 23 4 8B' 24 ".+ 9+!'
' 8' B"!+' 5"!!+5 ' "' 81+2A' " ' S' 59 43' 281+5 8' T'
" ' 9+' 23 4 ' 5! B 24' 92 ' "' +!B' 9 B' 2' 59 43
' 928' 7++ ' 82 3' 92 ' ."" 3' 1+"14+' 2!+' 9"8+'
@9"' 92D+' ' 8"B+' @26' "!' " 9+!' 84" .9+3' " '
9+ !' 5! B 24' + 3+ 5 +8F' 92 ' S' ' +D+!6" +'
923' 9 8' 3+8+! 8' 244' @" 43' 7+' ' -2 4 T' 9 8'
428 ' 8 2 +B+ ' 8' B"!+' @ 6' 92 ' ! 9 4'
2 3' 8+!D+8' !2 9+!' 28' 2 ' 3+J' " ' 9 B2 ' - 8C
5+' 92 ' 28' 9!"@ .' 2 6' 4 .9 ' 1" ' 9+' "! . '
" ' 5! B 24 6' ' 6" .' 59 43!+ ' 92 ' 9+!+'
928' 7++ ' "' 3+ 6' " ' !+25 " ' "' 5! B+'
2B" .' 59 43!+ ' ' 9+' 82B+' !25+' 1+"14+' 5" BC
B 6' "!' +D+ ' 2B 46' 2 3' ! 9+!B"!+' "'
3+ 6' ' 9+' !+2 B+ ' " ' 8 59' 5! B 24'
19+ "! + 2' 8' 2 ' 3 81 +3' 25 ' 9 8' B+2 8'
92 ' 8"B+ B+8' 9+' S' 5! B+8' T' " ' 9+' 59 43' 92D+'
." +' 1 89+3' "!' !+7 A+3 ' @9 4+' 8"B+C
B+8' 9+6' 92D+' 7++ ' 8 +! 46' !+1!+88+3 ' 2 3'
@9+!+' 1"88 74+' +J . 89+3 ' 4288' 2 3' 8"5 24'
3 +!+ 5+8' 92D+' 3" 7 +346' 7++ ' " ' + +5 '
9+!+' +81+5 2446' ' 9"8+' 5" ! +8' @9+!+' 2! 8 "C
5!2 5' 2 3' " 9+!' 4 A+' 3 8 5 " 8' 92D+' 4" .'
8 !D D+3' ' .!+2 ' 8 !+ . 9 ' 9+' 1! D 4+.+8' 2 3'
B B +8' !"B' 1 89B+ 8' 244"@+3' "'
859""47"68' 2 3' 8 3+ 8' 2 ' +3 52 " 24' 8 C
" 8' 7" 9' ' 9+' 43' "!43' 2 3' ' B+! 52 '
28' 2.2 8 ' 5"!!+81" 3 .' 2.+E54288+8' +48+@9+!+'
' 9+' 5"B B +8' ' @9 59' 9+6' !+8 3+' 2!+'
" +' " "! " 8' +J2B14+' " ' - 8 5+' ' 9+' B2 +!'
" ' S' 5! B+' T' 2B" .' 6" .' 1+"14+' ' 9+' "D+!C
4""A .' 2 3' +J5 8 .' " ' " + 8+8' 9+!+' 8' - 8 C
274+' 2 ' 244' ' " .9 ' "' 7+' ' 2' 3+B "5!256' 2 '
4+28 ' @ 9" ' 2D"!' "' 54288' 2 " 24 6 ' + 5 '
9+' 1!"5+88' " ' +3 52 " ' 89" 43' " ' 7+' B23+'
2' 1!"B" +!' " ' 8 59' 1!+- 3 5+3' ; "
9+!+' 928' 7++ ' 248"' 2' 3+5 3+3' 3 85! B 2 " '
' 2D"!' " ' 9+' B24+' 8+J' 9+!+' 28' +48+@9+!+' '
8"5 + 6 ' "!' 9+' YY 5! B+8' T' " ' 7"68' 92D+' 7++ '
5" 3" +3' 2 3' "D+!4""A+3' "' 2' B 59' B"!+'
8+! " 8' +J + ' 92 ' 9"8+' " ' . !48' "!' 9 8'
!+28" ' 8 2 8 58' B2A+' " ' . !48' "' 7+' 2 ' 5+!C
2 ' 2.+8' !2 9+!' B"!+' S' 5! B 24' T' 92 ' 7"68 '
" " 9+6' @+!+' " ' 8"' @+44' 89 +43+3') 3' +J5 8+3 '
269+@ ' @9"' @!" +' 27" ' 9+' 1! 8" 8' " ' " C
3" ' ' $>&Q' M8++' 44 8 ' 1 ' Q$;G ' 82 3 ' '!+ +!+ 5+'
"' 9+' S' 5! B+8' T' "!' @9 59' 7"68' @+!+' 52!5+!C
2 +3' 2 ' " 9 44' +438' S' "!' " !8+4D+8' @+' @ 44'
!2 A46' 5" +88' 92 ' 2 ' +8 B 8 +!' 859""4 '
@9+!+' @+' 1288+3' 8"B+' 0' 6+2!8' " ' " !' 7"69""3 '
8 59' 25 8' @+!+' 32 46' 1+!1+ !2 +3F' 2 3L6+ ' '
9+' 859"42!8' 923' 7++ ' 8+ ' "' 9+' 9" 8+' " '
5"!!+5 " ' 8 +23' " ' J "!3' "!' 2B7! 3.+' "'
5"B14+ +' 9+ !' +3 52 " ' 9+' 5" !6' @" 43'
"@' 92D+' 8++ ' B2 6' " ' !' 1426B2 +8' @"!AE
V .' 2B" .' 9+' 5" D 5 8' ' 9+' 3"5A62!38' !2 9+!
92 ' 4+ 3 .' 3 . 6' "' 9+' 8+ 2 +' "!' 9" "!'
"' 9+' 7+ 59 T' : 3.+' 38+6' 1 8' 9+' 528+'
"!' B+! 52' R +' 28' 8 !" .46' M8++' !2D 8 ' 1 '
J GO S' ' 2' 9 3!+3' 2D+!2.+' 859""47"68' 5" 43 '
3+!' 9+' 82B+' 5" 3 " ' 7+' 8 7-+5 +3' "'
1!+5 8+46' 9+' 82B+' +B 1 2 " ' 25+3' 76' 9+'
7"6' @9"' ""A' 9+' 1"5A+ 7""A' !"B' 9 8' + .9E



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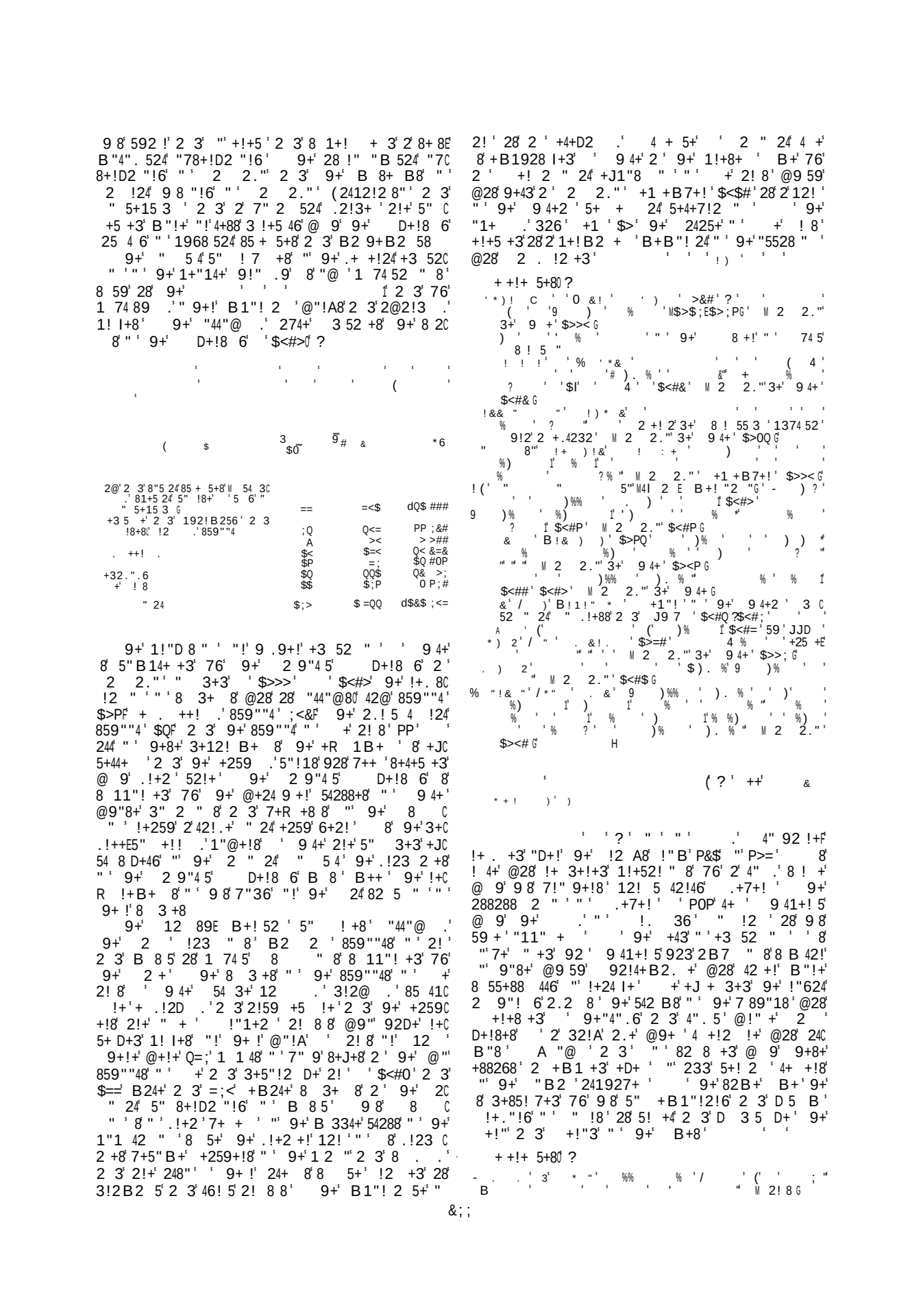
@28 " 3+3 $>$;" "! 9+ !2 ." +259+!8 "! 9+ % " !" +88"!8 @+!+ D +3 !"B +!B2 6 "" "!B 9+ 25 4 6" 9+ 8 " 2 3 28 2 !+8 4 B"3+! 8+5" 32!6 +3 52 " 9+ 5" !6 928 7++ 3+D+4"1+3 3+!+!B2 4 + 5+8 9+ 8 +928 7+5"B+ 25 2 D+!8 6 859""4 " +3 52 " + 3+3 "!1+C 12!+ 81+5 24 1!" +88"!8 "! 9+ 8+D+!24 7!2 59+8 " 9+ 8+5" 32!6 5" !8+ 9+ 5 !! 5 4 B 8 9+!+ "!+ 3 D 3+3 "8+D+ 3 8 5 8+5 " 80 M$G 12 89 MQG !+ 59 M;G .4 89 M=G +!C B2 MPG 9 8 "!6 2 3 .+".!2196 M&G B2 9+C B2 58 2 3 1968 58 MOG 7 "4".6 59+B 8 !6 2 3 B +!24".6 44 8 3+ 8 2!+ !+R !+3 "2A+ 1+32.".6 +J1+! B+ 24 18659"4".6 4". 5 + 9 58 9+ 9 8 "!6 " 19 4"8"196 5 D 58 2 3 +3 52C " 24 "!.2 I2 " 2 3 4+. 842 " 9+ 44 5" !8+ 5"D+!8 2 1+! "3 " =+ 6+2!8 9+ 7+. ." 46 6" .B+ '@+!+ 23B +3 "9+ 8 +7 42 +!' '@28 B23+ 5"+3 52 " 24 2 3 9 8 8 4 + 5+@28+J + 3+3 "9+1 74 5 % "!6" .@"B+ @9 59 2!+ !21 M 6 C 5!+28 . B7+!2 3 1!+8 .+ 9+!+ 2!+ 2 1!+8+ ;< % "!6" .B+ @ 9 2 + !"44B+ " "<;#Q 8 3+ 8 2 3 2 2D+!2.+ 2 + 32 5+ " 27" 0<###4 2 3 ;$ % "!6" .@"B+ @ 9=>$#8 3+ 8 2 3 2 2D+!2.+ 2 + 32 5+ " ;>##' 9+ B7+! "8 3+ 8 9+ 5" !8+" "9 B2 +8 "!! + 8+5" 32!6 5" !8+ $<#>' @28 &;;=" "@9"B =PPP @+!+ 6" .B+ 9+ 1! D2 + 8+5" 32!6 859""48 @9 59 92D+ 2 8 44 42!.+! 2 + 32 5+ 92 9+ % 1 2!+ 2 B+28 !+ 3+!."D+! C B+ 8 1+!D 8 " 28 9+ .!+2 +! 1 B7+! !+C 5+ D+ 1 74 5 8 78 3 +8 9+6 248"' "44"@ 9+ " 5 24 1!".!2B8 8 5+ 4 A+ 9+ % 1 9+6 1!+C 12!+ 8 3+ 8 "! 9+ D+!8 6 +J2B 2 " 8 + 5+ 9+ @9"4+ 1!"D 5+ " 8+5" 32!6 +3 52C " 9 4+ 8 1+!B+2 +3 @ 9 9+ B"3+! 81 ! 9+ 1!"D 8 " "!8+5" 32!6 +3 52 " 8 5"BC 14+ +3 76 81+5 24 +59 524 859""48 @9 59 2!+ "!+5+ "! . 7 92D+ 24!+236 288 B+3 .!+2 B1"! 2 5+ 9+ 3 8 ! 24 2 3 7 8 +88 @"!43 9+ 1! 5 124 859""48 " 9 8 54288 2!+ 9+ 5"BC B+!5 24 859""4 " 2 2."+8 274 89+3 $<#> 76 2 .!" 1 " 1 74 5E81 ! +3 5 I+ 8 @28 1!"D 3+3 @ 9 2 +@ 7 43 .76 9+ 2 " 24 ."D+! B+ @9 59 248"' B2A+8 2 2 24 21C 1!"1! 2 " "@2!3 8 8 11"! B 42!859""48 92D+ 8 5+ 7++ "1+ +3 (2412!2 8" " 5+1E 5 & 2 3 " 9+!5 +8 9+8+859""48 @9 59 2!+ + 3+3 "!8 3+ 8 !"B $Q "' $P 6+2!8 " 2.+ !+1!+8+ 9+ !8 8 2.+ " 2 868 +B " 5"B B+!C 5 24 +3 52 " 9+ 859""4 " B+592 524 2! 8 8 2 +3 2 2 2."7+2!8 9+ 82B+ !+42 " 3 8 ! 24 +3 52 " "' 9 8 859""4 1 1 48 2!+ 8+ !"B 244 12! 8 " 9+ 5" !6 2 3 9+ 8 55+88 " 8 .!23 2 +8 B2A+8 5+! 2 92 8 B 42!8 " 8 @ 44 8"" 7+ 1!"D 3+3 2 9+ 42!.+ "@ 8 " 9+ !+1 74 5 2 2." 928 248"4+3 9+ 1!"D 8 " "!9+ 3 8 ! 24 !2 .+ "." .!48 76 9+ +8 274 89B+ " 2 859""4 @9 59 9+ !23+8 "1+ "' @"B+ " "# 3!+88 B2A .2 3 92 B2A .2!+ 2 .9 28 @+44 28 7""AA++1 .8 + ".!2196 + 5 244 9+ 81+5 24 859""48 2B+3 9+ 5" !8+8 2!+ +B + 46 1!25 524 2 3 2!+ 592!.+ " 5"B1+ + +259C +!8 B+!" 8 1! D2 + 8"5 + +8 7" 9 8+5 42! 2 3 54+! 524 92D+ 7++ 25 D+ 1!"B " .C 3 8 ! 24 2 3 +59 524 !2 .28 2 3 81+ C 8274+ 12! " 2 " 24 +3 52 " /)% "? .9+!+3 52 " 5+ C +!8 9+ D+!8 6 " 9 4+ 2 . !2 +3 2 2 2." +1 $0 $>=;" 6 8 !+1!+8+ C 2 " 9+ " 5 4 " 74 5 8 ! 5 " 9+ D+!8 6 7+2!8 2 B1"! 2 12!' 8921C .9+ + !+5" !8+" "+3 52 " 9+5" C !6 8 8 2 +3 76 9+ 8 +!' 9 8 !+1"!' "!$<#>' 928 " " 46 7++ 9+ " 2 " " C 8 ! 5 " 2 3 4+2! .28 8 59 7 928 7++ 9+ 8" !5+" 9+ 1!".!+88 D+ 3+28 +3 52 " 24 !+ "!B @9 59 92D+ 8"' !21 346 B"3 +3 9+ C +44+5 24 5" 3 " " 9+ 1+"14+ !+5+ 6+2!8 9+ " 5 4 " 74 5 8 ! 5 " 8 592!.+3 @ 9 9+ 3 6 " 5" +!! .3+.!++8 2 3 4+8 @9 59 R 24 6 9+ 8 3+ " "1!25 5+ 1!" +88 " 8 "!+ +!9+ 1 74 5 8+!D 5+ 2 3 928 1!"D 3+3 2 8+! +8 " +J2B 2 " 8 28 2 5" 3 " 1!+5+3+ "' .!2 .9+ 3+.!++8 9+ 3+.!++" 259+C 4"!" " 9+ B2 +8 8 +D 3+ 5+ 92 9+ 8 C 3+ 1"88+88+8 244 9+ 3+28 @9 59 2!+ 3 81+ C 8274+ "' 2 B2 " " 5 4 !+ 2 3 2 ."3 5 I+ 9+ 3+.!++" 5+ 2 + 42@"!' B+3 5 +"!' B2 9+B2 58 M+ . ++! .G 8 54+2!' 1!"" " " 46 92 8 1"88+88"!' 8 R 24 +3 "' 1!25 5+ 9+ 5"!!+81" 3 1!" +88 " 7 " 248"' B14 +8 92 9+ A "@8 2 3 A "@8 @+ " 9+!' 8 7-+5 8 "8 36 @9 59 24 9" .9 9+6 B26 " 7+ +5+8C 82!6 9+ 1!25 5+ " 9 8 1!" +88 " 6+ . D+ 9 B 7!+23 9 " D +@ 2 3 J+3 1! 5 14+8 1 "' 2 D+!6 !+5+ 32 + 9+ B+B7+!8 " 9+ D+!8 6 25 4 +8 92D+ 7++ 1!" +88 " 24 B+ + .2.+3 "' 3+4 D+!4+5 !+8 7+ "!+ 9+ 8 3+ 8 9 8 868 +B 928 8+5 !+3 9+ +!+8 2 3 5"C "1+!2 " " 9+ 1! 5 124 42@6+!8 3"5 "!8 + . ++!8 + 5 " 2 2." 7 928 3+1! D+3 9+ D+!8 6 " "!.2 5 6 +! " 8 + "! 8 @+!+ B23+ 76 9+ "!B+!+5 "! " 9+ D+!C 8 6 ! (24+ + +4 +! "' 3+D+4"1 9+ 5" 3 " 8 " 8 " 24 4 + 76 9+ 1!"D 8C " "1+!B2 + 3 !+5 D+ 7"36 " @9 59 9+ D+!C 8 6 !+5 "! 8 1!+8 3+ 9+ 1!".!+88 D+ 81 ! " 9+ " 5 4 8 3 52 +3 76 9+ +8 274 89B+ $<#C " 2 81+5 24 54288 "! 9+ 8 36 " 9+ +J14" 2 "1" 824 1+ +! 2 3 2 24"." 8 824 8 D +@ " 9+ .!+2 B1"! 2 5+ " 9+ 824 1+ +! 3 8 !6 "' 9 4+ " 9+! +@ 592 ! 9+ B2 9+B2 524 5" !8+ 8 92 " 8+ 8B"4".6 2 3 8+ 8B 5 2!59 +5 !+ 8 ..+8 +3 12! 5 42!46 76 9+ +2! 9R 2A+ " $<#& 9+ 8+!D 5+8 " !"C +88"!' " +88 8 3+ 2 4"!8 @+!+ 8+5 !+3 "' 44



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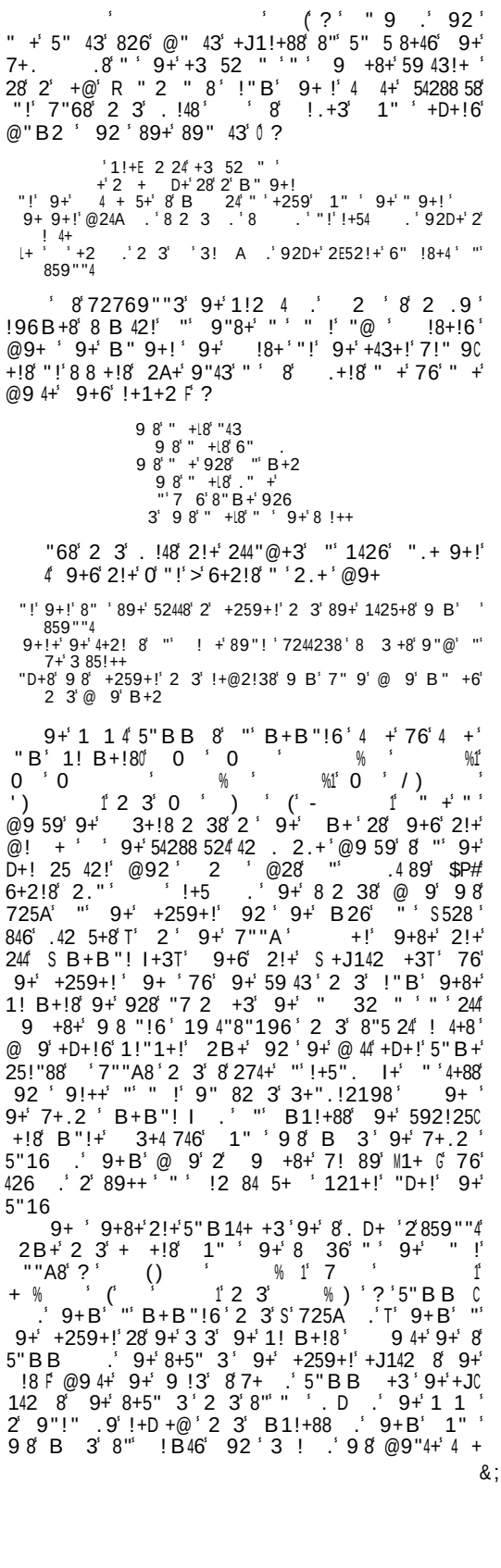


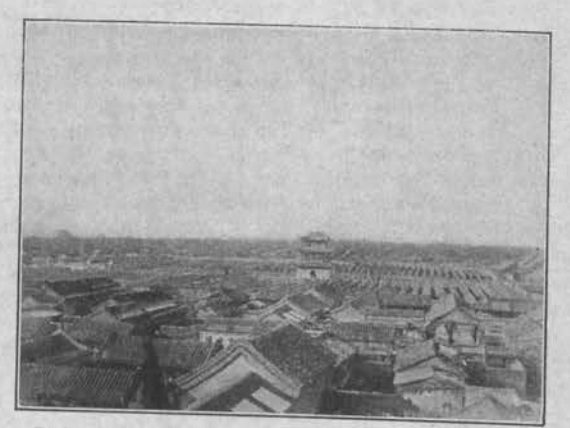
Interior of an Elementary School.

Exterior of an Elementary School.

Examination Halls, Chentu.

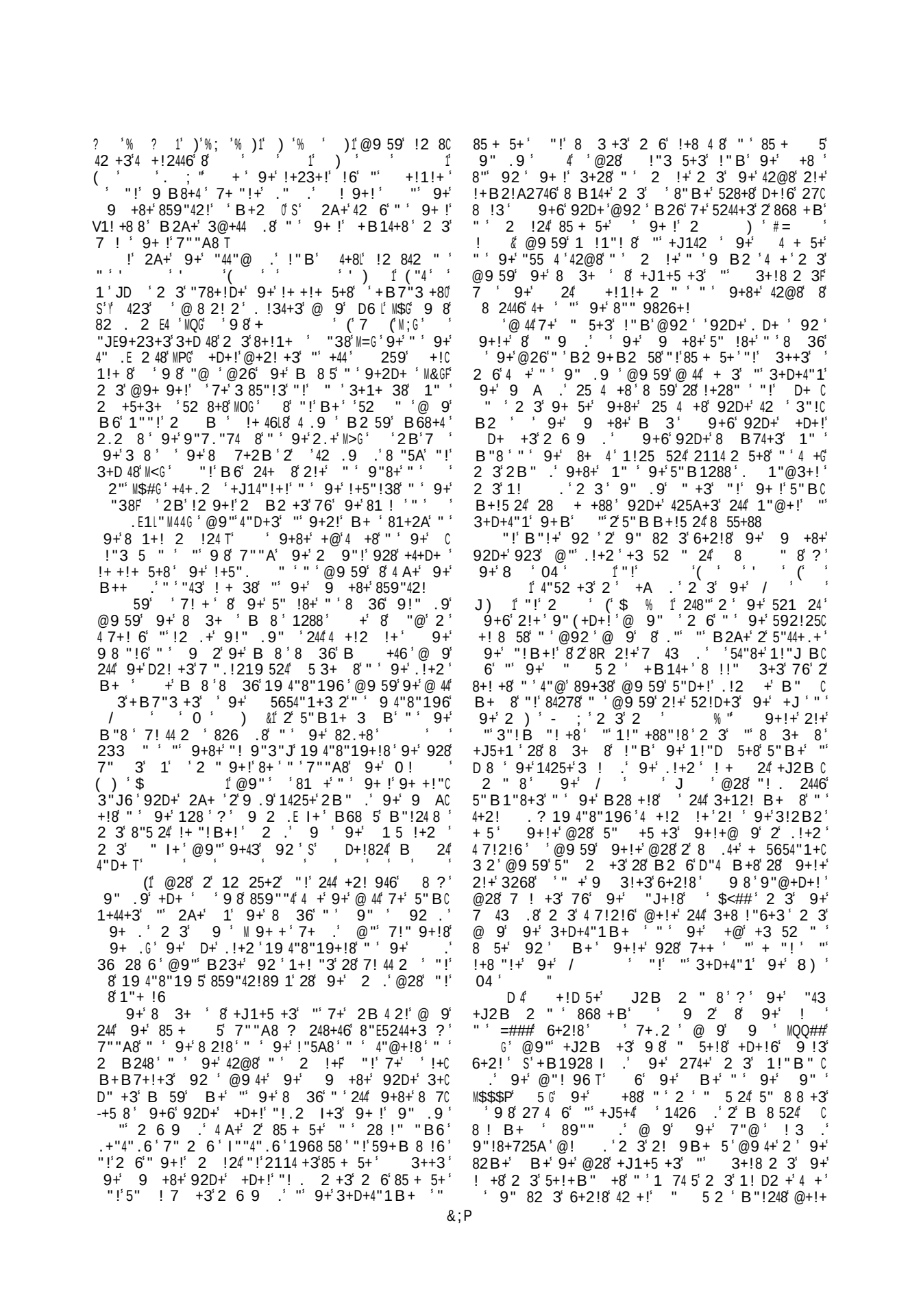
Examination Halls, Chentu.

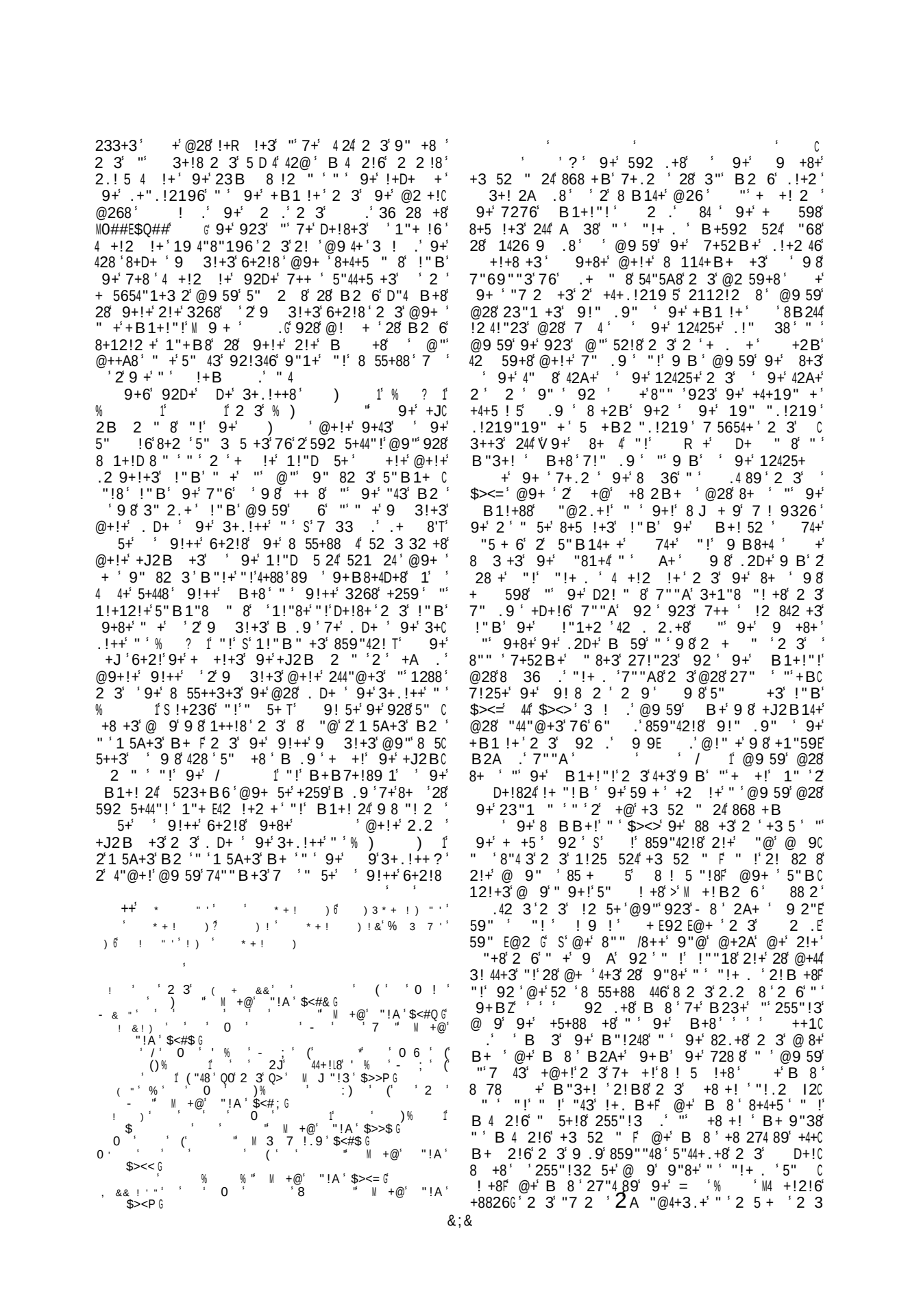
General View of the Examination Halls, Nanking.



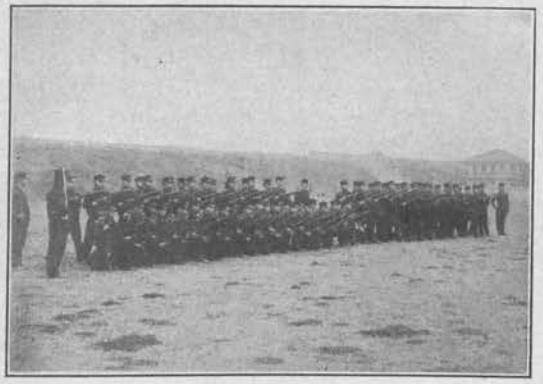
Ruined Examination Halls of the University, Peking.

THE OLD EDUCATION IN CHINA.





Peking University. Football practice on the Campus.



Military Cadets, Chentu, China.

A Class in Trigonometry in a Girl's School.

A Chinese Kindergarten.

"Explaining the Seasons."

Physical Culture Class in a Girl's School.

THE NEW EDUCATION IN CHINA.

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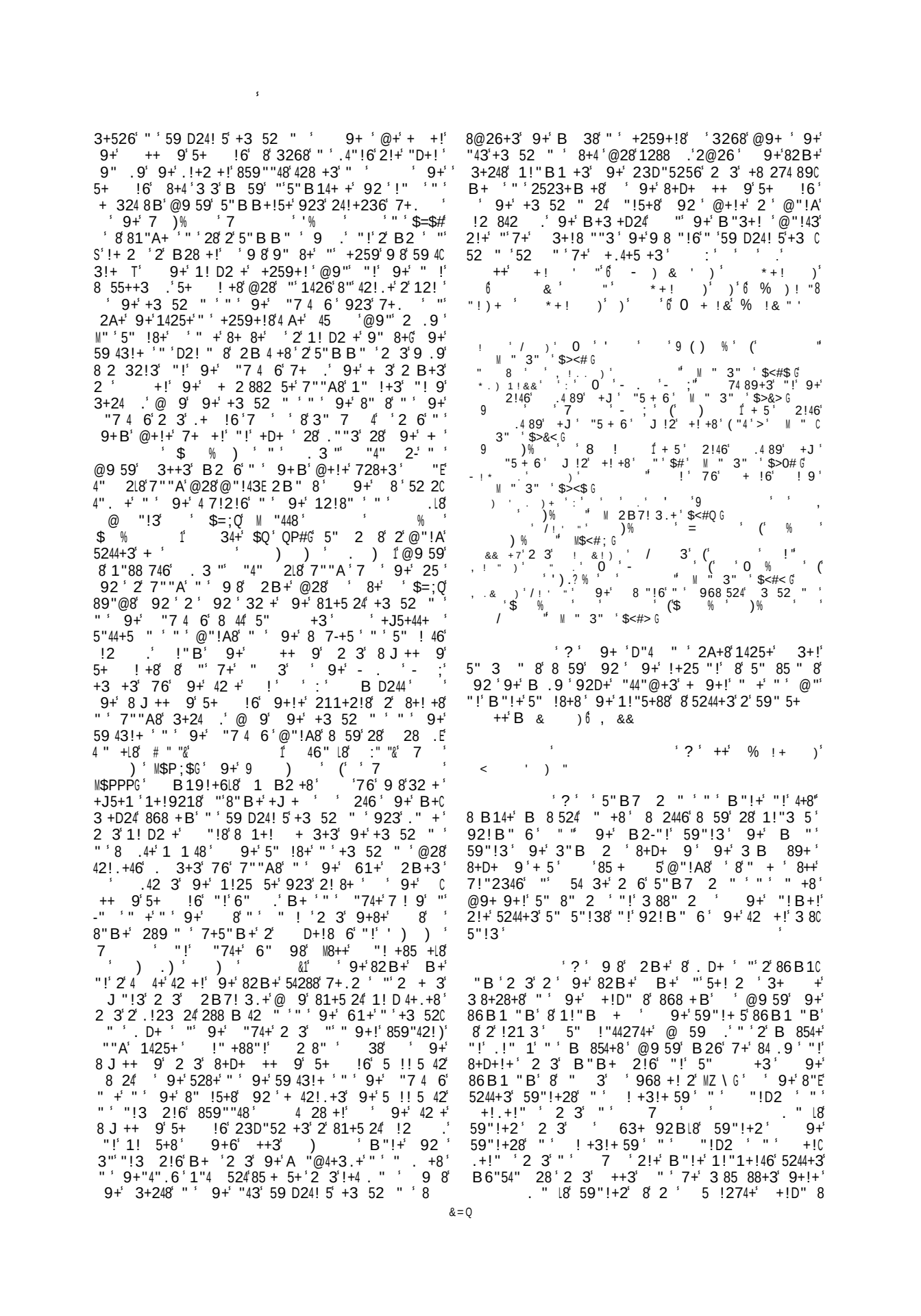
9+ 59 43!+ " 7" 9 8+J+8 @+!+ 7!" .9 1 @ 9 9+@"B+ " 9+ 9" 8+9"43 4 9+2.+ " 0 6+2!8 7 7+ "!+ 9 8 2.+ 9+ 7"68 @+!+ 2 .9 " ! 3+ 9+ 59 43!+ @+!+ 2 .9 " @! R +2!46 2 3 8+3 @2J 274+ 8 @ 9 2) " 1!+D+ @28 + " 12!59B+ 12! !"B 9+ !+. 42! +44+5 24 +3 52 " 9+ 7"68 !"B 9+ 2.+8 " 0 $P 6+2!8 @+!+ 2 .9 " + 5+ 2 3 9 + 5 .54 3+3 8@"!3 2 3 42 5+ 1!25 5+ 2 3 9+ 8+ " 9+ 8 .4+8 5A .9+ 9 ! ++ 9 5+ !6 @28 2 !+. 42! 85 + 5+ " 9+ B "8 5" B 14 52 +3 A 3 D"4D .2 A "@4+3.+ " 9+ "!+8 42@8 2 3 @28 3 D 3+3 "@ 7!2 59+8 +259 " @9 59 923 "7+ A "@ 3+ 2 4 2B+46 M$ D+ +!6 9+ 2! " 9 .9+ 3++! 2 3 8" "! 9 2 3 MQ 245" !6 2 B "8 3 5 4 2 3 D"4D+3 7 8 +88 5" B1! 8 .9+ A "@4+3.+ 9"@ 46 ++3 5244 2 3 9"43 9+ D2! " 8 54288+8 " 7 !38 8 59 28 9+ +! 245" 9+ 25!+ 9+ &$+! 9+ + 4 2 3 9+ 2D +! 9+ ! 8 !+24 I+3 9"@ B 59 9+ 59 43!+ 923 "4+2! 7+ "!+ 9+ 2.+ " $P 9+ @26 " 2!B8 2 3 81"! 8 M8 59 28 @!+8 4 .V7"J .! .! 3 . 4 .2 9+! .R 2 7 44 2 3 7+2! 72 .G 8 " 2 244 8 !1! 8 .92 2 5" 8 3+!274+ 1+!5+ 2.+ " 528+8 +D+ 9+ 2! 8 " !+23 .2 3 @! .@+!+ "!." + 42 +! 6+2!8 9+8+ 2! 8 9+ 528+ " B2 6 59 43!+ 3 3 " 5" B1+ + +!+8 @ 9 9+ 2! 8 " 5" !"44 .2 9"!8+ 2 .+! 245" 2 42 5+ 2

8@"!3 9+ 82B+ B26 7+ 82 3 " B 8 5 9+!+ @+!+ "11"! +8 " 4+2! 9+ 8+ " 8 ! B+ 8 2 3 " !2 9+ D" 5+ 2 3 " 3" 7 9"8+ 7"68 "! 6" .B+ @9" 923 2 28 + "! B 8 5 ""A 23D2 2.+ " 9+ "11"!C +8 +81+5 2446 28 9+ . "! B 8 !+486 @28 .!+2 46 211!+5 2 +3 9+ 2.+ 92 @28 42!.+46 3+1+ 3+ " 9+ + "! 8 " 9+ 2B2 + ! "! 2B 8+B+ 9+ 9" 8+8 @9+!+ !2 .5" 43 7+ 8+5 !+3 @+!+ " 4 B +3 " 9+ 92448 2 3 528 4+8 " 9+ "7 4 6 "B+ " 9+ .!+2 !+4 . " 8 9" 8+8 248" B2 2 +3 859""48 " 59 DC 24!6 M D ! +" 9+ 25 92 9+6 @+!+ " + 4"!38 " B2 "!8 2 3 923 ! .9 8 " @2!389 1G 2 3 " 3" 7 8 59 859""48 9+ +259 ." S 8" .T !+5+ D+3 D+!6 81+5 24 2 + " 9+ 4 +" 9+ D2!4+ 8 "!)6 M28 9+ 6" .12.+8 @+!+ 5244+3F 9+ . !48 " 9+ 9" 8+9"43 @+!+ " 5" !8+ 9+ & @28 B2 6 @268 2 92!3 " +28 9+6 .!+@ "43+! 2 3 B"!+ 521274+ " 3" .9+ @"!A " 9+ .!23+ 27"D+ 9+B 92 " 9+ 8R !+ +92D+ 8++ 8"B+ 9 . " 9+ ! " 3""! !2 .7 9+ 3""! 4 +@28 +D+ 7 8 +! 9+!+ @+!+ 9+ 859""4 4+88 8 " @9 59 8"B+ 9 .@ 7+@! + 3 !+5 46 7 288 B .M2 3 9+ 288 B1 " 8 2 5" 8 3+!274+ " +G 92 9+ 2! 8 " !+23 .2 3 @! .923 7++ 25R !+3 8 54+2! 92 9+ 1"" !4 4+)923 7+ "!+ 9 B @92 B 8 92D+ 7++ 2 3!+2!6 D 8 2 " B2 6 B 38 @28 +88+ 24 92 9+ 7"6 89" 43 7+5"B+ +J 1+! 2 9+!243!6 2 B "8 " D"4D+3 2 3 5"B14 52 +3 2! 92 9+ 89" 43 7+5"B+ 2 5"B1+ 52!D+! " B+2 2 " 9+! 24B"8 "!." + 2! 92 9+ 89" 43 25R !+ 244 9+ 2! 8 " 9+ D24+ 9+ .!"" B 9+ 2!B"!+!' 9 8 2 274+ 9+ 8R !+ 52!D+3 2 3 9+ 92 3+3 9+ @ +8 2 3 3 89+8 2 3 @28 "44"@+3 24" .9+ 274+ 76 9+ 12.+8 "!D2!4+ 8 52!!6 .9+ 3 89+8 92 9+ 8 " 92 3 9+ 2.2 @28 9+ 7 8 +88 " 9+ 8R !+8 2 3 12.+8 " B2A+ 9+ 7+38 " 9+41 9+ "!3 " 3!+88 " .!"" B 9+ 9"!8+8 85" ! 9+ 2!B"!' "!+"D+!' 9+ 8R !+ 84+1 9 8 4"!3L8!"" B " !' 2 9+ 3"" !' "!' 9+ 1 !1"8+" . DC .9 B 1!" +5 " 2 .9 9+ 8R !+ C 3++3 @28 7 86 "!' 9+ !2 .' " 9+ 12.+8 @28 9 8 3 6 +' 923 " +259 9+) " ! 3+ 28 2 8R !+ 89" 43 ! 3+ " 81+2A " . +8 M .4 89 2 3 +!B2 F)6 28 @+44 28 244 4+2! +3 " 81+2A !+ 59G " 92!1 2 3 1 1+ " 8 .2 3 32 5+ 2 3 9+8+ 9 .8 M2 3 " 9+!' "!B8 " 5 4 !+ 2 3 % 1 8 59 28 59+88 2 3 9+ ! 4+8 " .""3 B2 +!8 2 3 .2442 !6G @+!+ B1!+88+3 " 9+ D2!4+ L8 B 3 S @ 9 5"!!+5 " 8 9+ ! 592 B7+!8 T +" 9+ 59 + B2 248 " B2 +!8 @28 89"1 !"88+ +8 +L8 ') @28 2 92!3 2 3 7 86 4 +2 3 8 8" +!8 3+ @28 M " 2 7"6G 2!3 " 8 + .90 9+ 7"68 2 3 8R !+8 923 "@2 " 9+ 423 +8 " 9+ "@+! " 1426 59+88 @ 9 9+B @24A @ 9 9+B 32 5+ @ 9 9+B 92!1 2 3 8 .9+ B 9+ !++C 3"B 244"@+3 7+ @++ 9+ @" 8+J+8 211+2!8 92D+ 7++ .!+2 2 3 3+4 7+!2 +46 .!+2 28 12! 9+ +3 52 " 59 D24!6 52 3248 "

3" 7 '"55 !!+3' " ' "5528 " 8' 7 ' 8 59' 9 .8' @+!+' !2!+'2 3' " ' 9+' @9"4+' 9+' !++3"B' - 8 C +3' 8+4 ' ' B 8'7+' !+B+B7+!+3' 92 ' B2!C ! 2.+'@28'24@268" +'+ 3'2 B+3'2 '76' 9+'868 +B ' 2 3'5+! 2 46' '2'92!3'2.+' 92 '!+5A+3'4 4+' " ' 74""389+3 '" ' 12 '2 3'8 +! .' 9 8'59 D24!" 8' +!B .4 .'" ' 9+' @"'8+J+8'3 3'B 59' "'233' 2' + 3+! +88' 2'8+ 8+' " ' 9" "!' 2 ' 2 B"819+!+' " '5"B1288 " '2 3'!+4 . " ' "' 9+'!" 3' " '32 46' 4 +' 9+' 12!' 1426+3' 76' !+4 . " ' 8' D+!6' BC 1"! 2 ' 44' 9!" .9' 9+'+3 52 " 24'1+! "3' 9+' 7"6'M !8 '28'D2!4+ '"!' 12.+'"!')1' 9+ '28' 8R !+'2 3'2 '428 ? 2 'Q$' ?'28'A .9 G'928'46 .' 7+ "!+' 9 B' 9+' B1!+88 D+' !+4 . " 8' 5+!+B" 6' " ' 9 8' D+8 !+' 28' A .9 ' 9 8' !"7 .' @ 9' 2' @9 +' 5' "!'1 ! 6'@ 9' 9+'!+3'!"7+' "'89"@' 92 '9+'928'74""3' "'89+3' "!' 9+'2 9' 9+' 425A' " 74+' "' A++1' 3+2 9' 7+ "!+' 9 8' B 3'2 3' 9+ ' 9+' .9 ' " '@2 59 .' ' 9+' 9 !59' 9+' 5" +88 " ' 9+' "46' "B B " ' 9+'! 24'" ' 9+' ' ' % ')1' 9+'8+!B" ' " ' 9+' .9 46' +' + @ J' 9+' 6" .' 7"6' !8 ' 4+2! .' 9+'2!' " 'A .9 46'4 +'2 3' 9+'B "B+ ' @9+ ' 9+'2!B"!' 8' 1 ' " ' 426'8"B+' + ' 6+2!8' " '5" " 8' !2 .'@ 9'2' 3+ +'!+4 . " 8' 2 3' B"!24' 1 !1"8+' D +@' 9 8' 54+2!46' 21C 1+2!8' 9+' 8'+D 3+ 5+' " ' 9+'8 7-+5 ' 9+' "44"@ .'255" ' 8' 2A+ ' !"B'2'42 +' ++ 9E' 5+ !6' 8' " ' 2' 9 ! ++ 9E5+ !6' !+2 8+' " ' 9+'8 7-+5 ' " ' 9 8' !2 .' ' 9+' ! 89' 8+ B ' 9+' @"!A' ' R +8 " ' @28' D+!6' 1"1 42!' 2 3' 8' 8+' 4" .' " 4 D+3' 9+' "!B24' 859""48' " ' 59 D24!6' 9+' 8' 8' 2' !2 842 " ' " ' + ' ' $ %) 1' @! + ' "!' .' 9 4 11+' 4+' +4' " ' !2 5+' 7+ "!+' 9 8' 255+8C 8 " ' '$Q>P'76'9 8' "!' . 3 "' "4" 2' @9"' 8' A "@ ' "' 8 3+ 8' " ' 9 8' @"!A' 28' 4+8' 3+' "B B+' 9 8' !2 842 " ' "' !+ 59' @28' +J+5 +3' 2 ' 9+' !+R +8 ' " ' 9 4 11+' 76' + !6' 3+' 2 3' "!' + !6' 3+' 2 596 '"!' 1"88 746' 76H 64+8' 3+' 2B1 8' M +8592B1+8G' 9 8' 0 ' ' 7) ' $ % ' 28A8' +2!46' ' 2!' ' @92 ' 8' 9+' S'8"D+!2 ' 7 + ' 3+' 5+8 +' B "! +4+' D6+T'Z 9+'2 8@+!'5"B+8' 92 ' ' 8' " 'S'3+4 ' 3 '5"!18T' "!' ! 59+8' "!'S'9" + !'B" 32 +T' "!' .4"!6' 2 3' !+ "@ ' "!' "!5+' " '5" !2.+F "!' 3"+8' ' 4+' ' S' "!5+' 82 &' + ' 7+2 3' 3+' 5"!18 T' 7 ' ' M521' $$G' S + D!+8' 3+' 42!.+88+T' 2 3' ' ."D+! .' 255"!3 .' "' 42@' 2 3' !+28" ' 9+' 8+5" 3' 12!' ."+8' " ' "' 3 85 88' S' 2' D+! +' 3+' 82.+88+ T' 2 3' 3+542!+8' 92 'S 4+8' !" 8' + ' 1! 5+8' 3" D+ ' +8 !+' 82.+8 T' 92 ' S' 82 8' - 8 5+' + ' 82 8' 3!" !+' 4+8' " 2 4B+8' +' 1+ D+ ' 3 !+! T' 4268' 8 !+88' " ' 9+' BC 1"! 2 5+'" ' "!5+' 2 3'5" !2.+' 2 3' " ' 9+'D ! +8' " ' +B1+!2 5+'2 3'42!.+88+' 9+'8+5" 3'12!'" ' 9+' 8+5" 3' 7""A' 3 !+5 8' 9+' +259+!' M521' PG' "' 8 ! 5 '59 43!+ 'S'+ '42' "6'52 9"4 R +'3+'82 5 +' +.4 8+ T' M&G' S' 8 ! !+' +'-+ +88+'2'7" +8' B+ !8' +'7" +8' B2 !+8' 2D" ! T' MOG' S' 21!+ 3!+' +'-+ C +88+' 4+8' 85 + 5+8' 3+' 4+ !+' +' 3+' 54+!. +T' 9+' 5!"@ '" '244' 8') 1' 5" 14+3'@ 9' ." '3'42@8' "!' 9+' 1+"14+' "B+ 9 .' B"!+' B 8 '7+' 82 3' 27" ' 9+' 8+D+ 9' 5921 +!' 28' ' 3+248' @ 9' 9+' R +8 " ' 92 ' 928' 1' 44' "@' 7++ ' 4+ ' 3 8E D" '$; O '

5 88+3' ' 9 8' 2! 54+' 9+' +44+5 24' !2 .' " ' 9+' 12.+8' "!' 32B" 8+2 J' 9+' 5921 +!' 5"D+!8' + '12.+8' M "4 "8' $<>"EQ#>&G' ' 8' + C 4+3' S'4+8' + 2 8' 3+8' .+ I' 9"B+8' + ' 3+8' !" 8' + ' 1! 5+8' 3" D+ ' 21!+ 3!+' + ' -+ +88+' 4+8' 85 + 5+8' 3+' 4+ !+' + ' 3+' 54+!. + T' " ' " 46' B 8' 2 '7 '244" 9+!' 9 .8' 92 '2!+' "' 7+' @+44'4+2! +3'7+'4+2! +3' '6" 9' +'.+' " ' 9 8' 1" ' 9+'8 ! A .'19!28+'C'2 88'1" !'5+'R +'4+8' 85 + 5+8' 8+ '4" . +8' + '42' D6+' 3+' $ "B B+' +8' 7! + ' +' 4'5" D + '5"B B+ 5+' 3+' 21!+ !+' + +' -+ +88+ T' +' 2!+' D+!6' 892!146' B23+' "' 8++' 92 ' 9+' +44+5 24' !2 .' " ' 9+' 5" ! '859""4' @28' 5+! 2 46' " ' 7+9 3' 92 ' " ' 9+' .!2B B2!' 859""4' S' +8' 19 4"8"19+8' 3 !+ ' R +' 48' " ' 8+1 ' 85 + 5+8' !2 ++8' + ' 4 7+!2 41' 2' 852D" !C ? ' !2B2 !+' 4". 5R +' + 9"! 5R +' B 8 5R +' 2! 9B+ 5R +' .+"B+ ! +' + ' 28 !" "B +' 4+8' R + +8' 85 + 5+8' 4+8' 19 4"8"19+8' 21+4+ '4 7+!2 41' 1" !' 5+' R +' 4+8' + 2 8' 3+8' 1! 5+8' 4+8' 8" 4" + ' 21!+ 3!+' ' 21!+ 3" + ' 1!+B)!+B+ ' .!2C B2 !+' +' 2!+' "43' 92 '!9+ "! 5' 8' +5+8C 82!6' "!' 9+' 59 43!+ '" '1! 5+8' 92 '2! 9B+ 5' 9+'85 + 5+' " B7+!8' 84+2! +3'76' 9+'59 43!+ ' " ' 9+' .+ !6' "!' @ 9" ' 2! 9B+ 5' 9+6'52 C " ' A "@' B 85' 1+! +5 46' 92 ' .+"B+ !6' +259+8'S'4+8' B+8 !+8' '4+8' R 2)8'T' " ' 9 .8' 2 3' 8' +5+882!6' "' 28 !" "B6'@9 59' +259+8' 9+' R 24 6'3 8 2 5+'2 3' B7+!' " ' 9+' 8 2!8' ' 4+8' 3+' "B B+'5" !' +259+!' ' 9+' 42 +' 9 ! ++ 9' 5+ !6' 3"+8' " '4 B ' 9+' !2 .+' " ' 8 36' "' 9+' ! D B' 2 3' _ 23! D B' #:" "&" 9+!+' 2!+' " 9+!' 85 + 5+8' " '_1+5 4 2!' D24 +' "' 9+' A .46' 92 '2!+' B "!+' "74+' 92 ' 9+'8+D+ ' 4 7+!24' 2! 8' 9+!+' 2!+' M$G' 2 !24' 85 + 5+' @9 59' 3+248' @ 9' 9+' 2 !+' " ' 9 .8F MQG' ' % % ' %:) 1' @9 59' . D+8' A "@4+3.+' " ' "3' 2 3' " ' 9 8' 2 .+48F M;G' 9+"4".6F M=G' 9 58'? ' 9+' 85 + 5+' " ' ."D+! .' 6" !8+4 F MPG' J% %:) '?' 9+' 85 + 5+' " ' ."D+! .' 6" !' 9" 8+F M&G' $ %:) '?' 9+' 85 + 5+' " ' ."D+! .' 5 +8' 2 3' A .3"B8' ! 46' 9+' 5 !! 5 4 B' ' 9+' 859""4' "!' 1! 5+8' @28' 23C D2 5+3'+ " .9' ' 9+' 9 ! ++ 9'5+ !6 /2 3' ' B 8' 7+' !+B+B7+!+3' 92 ' 9+' 4+88+!' 5" ! 8' " ' ! 5+' 2 3' A+' 2 3' 2!4' 2 3' 2!" ' 2 3' @+24 96' .9 '@+!+' B"3+4+3' " ' 9+' " ! ' " ' 9 4 11+'!" ' 3@2!3' ' "3" 7' 9+' +259+!8' D2! +3' 'R 24 6' 2 3' 9+'8 2 32!3' D2! +3' !"B' 244' "' 244' 2 3' 2' ."" 3' 3+24' 3+1+ 3+3' " ' 9+' @2!4 A+' 25 D 6' " ' 9+' B+' 2 3' 9+' "11"! C +8' "!' 81"! ' "!' 9+' 8+' " ' 9+' 7"@' 2 3' 9+' .+! 245" ' 7 ' 9+' 25' !+B2 +3' 92 ' 9+8+' 7"68' 923' 28' 2 ' 4 B2 +' 3+24' 9+' 27"D+' 5 !! 5 C 4 B' 2 3' 248"' 923' "'4+2! ' !+ 59' M" ' " ' 7""A8' 8 59' 28' 92 '@! + ' 76' 24 +!' 3+' 7+48@"! 9' #:" "& "!' 9+' " 8+' " ' 236' " 68 2' 3+' " E' 59+ 86' " ' @2 85"B 7+' ' + ' "@?!3' 9+' + 3' " ' 9+' 9 ! ++ 9' 5+ !6G' 9+!243!6' 2 3' 2 ' 9+' " 9+!' 2! 8' 2 3' .!25+8' " ' @9 59' B+ " ' 928' 7++ ' B23+' ' @28' 5+! 2 46' 2' D+!6' 5"B 14+ +' +3 52 " F " '4+88' 5"B 14+ +' ' 8' @26' 92 ' 92 ' . D+ ' 76' 9+' .!2B B2!' 859""4' 2 3' 9+' D+!C 8 6' 5"B 7 +3

+'@"!3' '5" 54 8 " ' B 8 '7+' 82 3' 28' "' 9+



3 8+28+ "55 !! . 23 4 8 7 8 8" !2!+ 28 " @2!!2 3+85! 1 " " 46 +J 7""A8 " +!C D" 8 3 8+28+8

9+ % (' 1 "! % 1 8 9+ B"8 5" B B" 2 3 9+ B"8 B 1"! 2 " " 9+8+ 3 8+28+8 2 3 8 24B"8 +J54 8 D+46 " 3 59 43!+ !"B 2 +J2B 2 " " 9+ 9 8C "! +8 " "D+! @" 9" 82 3 8 59 12 + 8 !+2 +3 9 8 54 5 2!! 89"@8 92 " 46 " + 9 !3 " 9+ 528+8 2!+ 7"68 2 3 6" .B+ 2 3 92 9+ 3 8+28+ "55 !8 B"8 !+R + 46 7+ @++ 9+ 2.+8 " & 2 3 $P 46 & 1+! 5+ " " 9 8 528+8 7+.2 7+ "!+ 9+ 2.+ " & =P 1+! 5+ 7+.2 7+ @++ 9+ 2.+8 " & 2 3 $# ;> 1+! 5+ 7+ @++ $$ 2 3 $P $# 1+! 5+ 7+C @++ $& 2 3 Q# 2 3 " 46 Q 1+! 5+ 7+.2 2 +! 9+ 2.+ " Q# @ 4 7+ " 5+3 92 9 8 8 2 3 8+28+ 5" 5 3+ B+ @ 9 859""4 4 + 8+28" 2 D2! 2 " 928 7++ " +3 76 8"B+ "78+!D+!8 9+ .!+2 +8 B7+! " 528+8 7+. C . 9+ 81! .B" 98 !"B 2!59 ": 46 B"8 " 9+ 528+8 9+ @ 59 .8 2!+ 7 42 +!24 7 27" " + 9 !3 " 9+ " 2 89"@ " 46 42 +!2 3 8 !72 5+

9+ 3 8+28+ 8 59 + 46 " 3 2B" .+J5 274+ 2 3 +!D" 8 59 43!+ 8 2446 " ! 5 12!C + 8 2 3 +81+5 2446 2B" .9"8+ @9" 2!+ 27C "!B 2446 7! .9 2 3 1!+5"5 " 8 8 82 3 "7+ 7!" .9 " 76 +B" " 2 89"5A8 8 59 28 9"8+ " ! .9 "!" .! + 2 3 76 B+ 2 8 !2 9+ +B" " 2 89"5A B 26 1!+5+3+ 76 " 46 2 +@9" !8 "! 76 28 4" .2 1+! "3 28 8+D+!2 @++A 9+ 7+. . " 9+ B" "! 3 8 !72 5+8 25A " +J+!5 8+ B 1!"1+! "3 2 3 723 2 ! 9+41 " 3+!B + 9+ 868 +B 2 3 1!+3 81"8+ " 2 2 25A 9+ 42 +!5" 3 " 8 288"5 2 +3 @ 9 B+ 2 8 !2 !"B 9+ 5" +3 @"!A " 9+ 859""4 6+2! 8 2A+ " +J142 9+ 5!+28+3 B"!7 3 6 3 ! .9+ 81! .2 3 +2!46 8 B B+! B" 98

9+ 2D+!2.+ 3 !2 " " 9+ 3 8+28+ 8 27" 9!++ B" 98 ! .9+ !8 B" 9 9+ 86B 1 "B 8 8 2446 5!+28+ 8+D+! 6 2 3 9+ .!23 2446 3 B 89 9+!+ 8 2 + 3+ 56 9+ !+5 !!+ 5+" 9+ 2 25A8 2 9+ 82B+ 8+28" +259 6+2! 2 3 9 8 B 26 248" 7+ 255" +3 "! " 9+ .!" 3 " 723 96. + 5 5" 3 " 8 3 ! .9+ @ +!B" 98 2 3 9+ 8 !2 " 5" +3 859""4 @"!A 2!! 8 2 +8 92 59"!+2 8 " 2 3 !+5 8+R +42 " 9+ 25 + +5 " 8 3 8+28+8 @9 59 59 43!+ 92D+ 2 3 92 9+!+3 6 14268 " 46 2 8B244 12!

9+ 59"!+ 5 B"D+B+ 8 2!+ !!+. 42! @ 59C .8 " 5+! 2 B 854+8 8 2446 9"8+ " 9+ 25+ 2 3 " 9+ 2!B8 2 3 4+.8 24 9" .9 8+D+!+ 528+8 9+ B 854+8 " 9+ +5A 2 3 " 9+ ! A B 26 7+ D"4D+3 9+ 25+ !+. " 9+ 4 18 "8+ " . +2 3 -2@8 2!+ B"8 " + 2 +5 +3 2 3 1!" ! 8 " 9+ " . +8 211 .!" 7 C .B"D+B+ 8 " 9+ -2@8 2 3 .! B25+8 2!+ 5"B B" ! 9+8+ B"D+B+ 8 52 " 7+ 5" C !"44+3 9+ 81++59 7+5"B+8 +J14"8 D+ 592!25C +! 2 3 9+!+ 8 2 B+8 2 3+5 3+3 9+8 2 56 B2 6 528+8 " + " 9+ +2!4 +8 8 . 8 8 2 25C 5 !256 9+ B"D+B+ " 9+ 92 38 2 3 2!B8 +D 3+ 5+3 76 2 27 4 6 " 1!"1+!46 1+! "!B 25 8 92 2!+ +D+ 927 24 R 38 52!! +3 " 9+ B" 9 B 26 7+ 81 44+3 9+ 54" 9+8 2 3 9+ 89"+8 B 26 7+ 7 " +3 "! 425+3 255 !2 +46 2 3 " 46 @ 9 .!+2 3 5 4 6 9+ D"4D+C B+ " 9+ 4+.8 9+ .2 8 8 +236 2 3 9+!+ 8 2 8 2..+! .3 + " 9+ !!+. 42! 6 "!5+ @ 9 @9 59 9+ ++ 2!+ 1!"1+44+3 2 3 1425+3 1" 9+ 4" "! 85 42! @+2A +88 2 3 !C !+. 42! 6 9+ "!5+ " B"D+B+ 8 255"B 12 6 9+ D"4 2!6 B" "! 3 8 !72 5+8 9+ 9+ 59 43 8 "43 " .!281 6" ! 92 3 !B46 2 3 8 +23 46 +R 24 +8 9+ .! 1 @ 44 7+ "C 5+3 2 3 8 B 42! 592 .+8 9+ 8 !+ . 9 " 9+! B 854+ .!" 18 52 7+ 3+ +!B +3 76 8 C 274+ +8 8

9+ 3 +!+ 5+8 9+ "55 !!+ 5+ " 9+ 5" C D 48 D+ B"D+B+ 8 2!+ B2!A+3 2 3 9 8 928 7++ 2A+ 28 2 728 8 " 54288 52 " 8 8 5 + 9"@+D+! " A "@ 92 B"8 528+8 89"@ 2 278+ 5+ " 59"!+ 5 B"D+B+ 8 3 ! .!+8 2 3 84++1 92 8"B+ 9+!+ 8 2 5!+28+ 9+ B"D+B+ 8 9+6 2!+ 2 + 3+3 " 2 3 B" "! 28A8 2!+ " 7+ 1+! "!B+3 7 92 8"B+ 12 + 8 9+ D"4 2!6 B"D+B+ 8 5+28+ 1" 9+ 7+. " D"4 2!6 B"D+C B+

9"!+2 8 " 7+ 3 +!+ 2 +3 !"B 5" D 48 " :" "&1 !"B 9+ D2! " 8 A 38 " 5 :" "&1 2 3 !"B 9+ 248+ 59"!+2 @9 59 8 " 3 968 +! C 524 1+"14+ M + " ! 4 9+ 42 +! 528+ 9+ B" "! 19+ "B+ 2 2!+ " 255"B 12C +3 76 @+2A +88 2 3 76 9+ B+ 24 592 .+8 2 3 9+ B"D+B+ 8 52 !+23 46 7+ 8 "11+3 "! 2 B+ 76 8 . .+8 " "! 76 "!5 74+ 5"B B2 3 9+ +!B ' " ! + % 928 7++ 8+3 " C 54 3+ 244 "!B8 " 59"!+2 7 9 8 @ 3+ 8+ 8 "@ 4 B +3 " 9+ 42 6 2 3 !+8 ! 5 +3 2 B+3 524 @26 " 9+ 59"!+2 288"5 2 +3 @ 9 2 3 52 8+3 76 968 +! 2

) ! +59"!+2 9+!+ 2!+ B+ 24 592 .+8 5"C 5 3+ @ 9 9+ B" "! 3 8 !72 5+ !! C 27 4 6 "!.+ 4 +88 2 B+8 2 B"!24 "74 R 6 3 8 !72 5+8 84++1 2 3 "5528 " 2446 D 8 24 9244 5 2 " 8 92D+ 7++ " +3 9+ +6+ /B 854+8 7+5" B+ D"4D+3 3 14"1 2 @ 9 8 B+ 24 + +5 B 26 7+ 1!+8+

!"B 9+ +3 52 " 24 8 2 31" 244 59 43!+ @ 9 59"!+2 " @92 +D+!" "!B 89" 43 7+ !+2 +3 24 A+ 9+6 89" 43 7+ !+B"D+3 !"B 859""4 2 3 1425+3 3+!1!"1+! B+3 524 52!+ 2 3 !+2 B+ 7" 9 "! 9+ !" "@ 7+ + 2 3 "! 9+ 82A+ " 9+ " 9+!59 43!+ 9+ 54288 2 3 9+ 859""4 8 +! .!"B 63+ 92B 859"!+2 9+ 59 43 8 274+ "! 1!"1+!46 1+! "!B 9 8 859""4 @"!A 2 3 8 92!B 4 "! 9 B "! 1+!B 9 B "! 5" +8 1!"1+! ""3 .""3 2 ! 2 3 8 274+ +J+!5 8+8 2!+ 23D 8274+ 7 + 2 8 B 14+ 592 .+ + D !" B+ @ 44 52 8+ 9+ 86B 1 "B 8 "! 8 78 3+ 9+ " 9+! 92 3 " 255" " 9+ B2!A+3 8 ..+8 7 4 6 " B2 6 59 43!+ 8 +88+ 24 92 9+ 59"!+ 5 59 43 7+ !+B"D+3 +48+ 9 8 B"D+B+ 8 B 26 7+ 2A+ 28 2 +J2B 14+ 2 3 5"1 +3 9 8 @26 B2 6 528+8 " 968 +! 524 59"!+2 "! (8 32 5+

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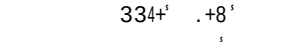

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2 3 .!2B B2! 2 3 9+ 52 " 3" " +274+ "" 3"7" 9 8+12!2 + B28 +!8 "!+259 9 8 B28 +! 8 89"@ 76 9+ 5921 +! !+5"!38 "" 7+ 3 8 5 !"B + 9+! 9+ .+ +!24 .!2B B2! 859""4 B28 +! 211" +3 76 9+ 592 5+44"!" "! 9+ .+ +!24 8" .859""4B28 +! 211" +3 76 9+ 1!+5+ "! 8 1!"7274+ 92 2 !8 9+ @28 B+!+46 2 1! D2 +" "!" "! 9" 8+B28 +! "" +259 2 3 4""A 2 +! 9+ 7"68 9+ !9" 8+ 2 3 92 9+6 8 44 2 + 3+3 9+ .+ +!24 .!2B B2! 859""4 2 3 8" .859""4

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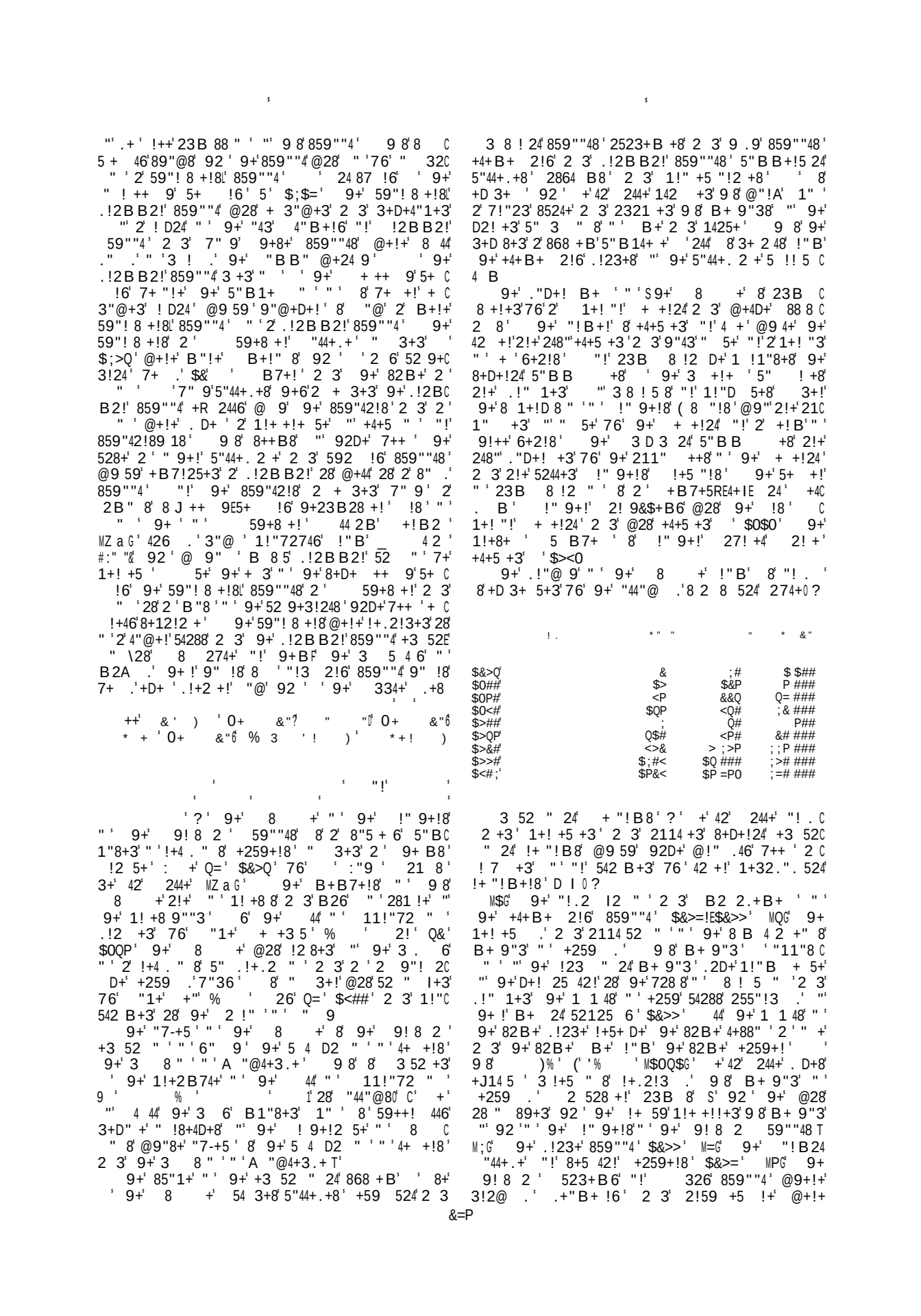

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9+ 5" 8 +3 9+ 8+5" 3 "7-+5 " " 9+ C
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28 5 ! 5 14+8 ?9+ "44"@ .2!+ 9+
.+ +!24 728 5 1! 5 14+8 " 9 8 868 +B " +3 C
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9+ !' B"!248' +81+5 2446' +D 4' 5"B12 " 89 1 M=G' "' 5 4 D2 +' 9+' 927 ' " ' !2 A +88' 2B" .' 1 1 48' ' @"!3' 2 3' 3++3' 2 3' "' 81 !+' 2' .!+2 ' 9"!!"!' "!' 961"5! 86' 2 3' 46 .' MPG' "' 1!+C D+ ' 2 4 8' 76' 2 ' + 4 .9 + +3'D . 42 5+' M&G' "' 25 ' "@2!3' 9+' 59 43' @9"' 928' 5" !25 +3' 8"B+' D 5 " 8' 927 ' 28' 2' 8A 44 4' 1968 5 2 ' !+2 8' 9 8' 12 +

24 52 " 8' " ' +259+!8 ' ? ' +' 42' 244+' 3+B2 3+3' 9+' "44"@ .' R 24 52 " 8' !"B' 9 8' 3 85 14+80' ?

$ % <' ' ."""3' 5" 8 " ' 2' 8 !" .' 54+2!' 2 3' 86B12 9+ 5' D" 5+' 2 3' 2' 3 . +3' 52!! 2.+' 9) 'd ' 3+!8 2 3 .' 8 E V 5 + 46' A++ ' "' .!281' 1!"B1 46' 9+' 8+ 8+' " ' 9+' 1 1 4L8' R +8 " 8' 2' 8" 3' - 3.B+ ' 1!25 524' 5"B B" ' 8+ 8+' 2' !+ + D+' B+B"!6' 5"!!+5 ' 2 3' 4 + ' 81++59' 2' ."""3' B+ 9"3' 2 3' 9+' 25 4 6' " ' +259 .' *' ' ! +' D"C 52 " ' .!+2 ' 3 . 6' " ' 592!25 +!' 1"4 + +88' A 3 +88' !B +88' .+ 4+ +88' 2 3' 2 ' D "C 4274+' 3+4 6' "'3 6 '7" 9' '1! D2 +' 2 3' 1 74 5' 4 +

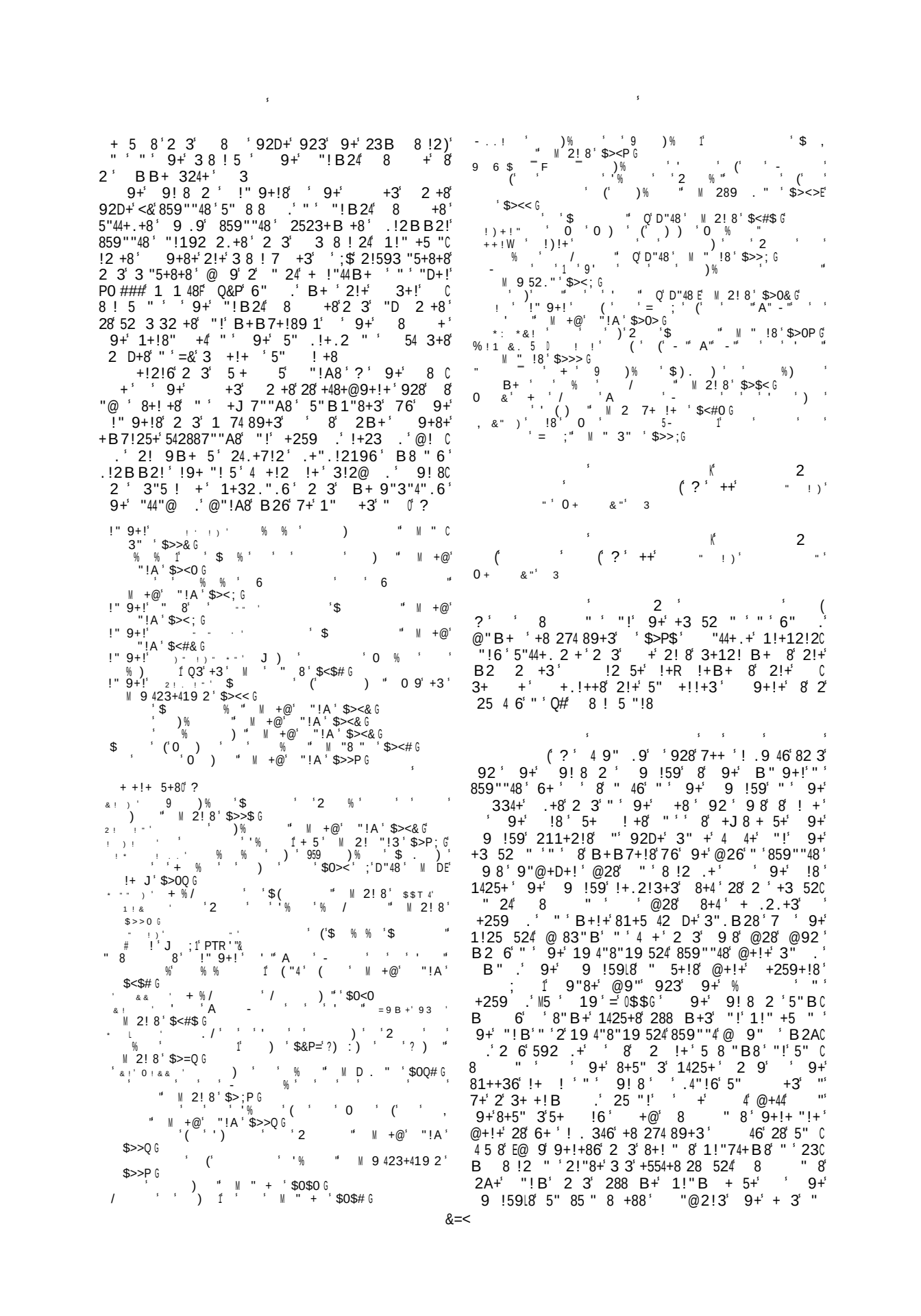
' ."""3' +259+!' 928' 9+' D ! +8' " ' .!2D 6 ' 8 4+ 5+' 3 85!+ " ' 1! 3+ 5+' @ 83"B ' 12 + 5+' !+8+!D+' .+ 4+ +88' I+24' D . 42 5+' 1 + 6 ' 2 3' .+ +!"8 6

+' 42' 244+' 8 !" .46' 8 8 +3' 1" ' 9+' 5"!!+5C " ' " ' 9+' "44"@ .' 2 4 8' '6" .' +259+!80' ? M$G' +!D" 8 +88' ' +259 .' MQG' + 42 56' 2 3' 5" 8 2 ' B"D+B+ 8' " ' 9+' 7"36' M;G' 9" .9 4+88 +88' 2 3' 3 D+!8 " ' M=G' 28 3 C " 8 +88' ' 1 89 .' 2 4 8' MPG' B12 + 5+' 92!89 +88' +J5+88 D+' 8+D+! 6' M&G' 1 +' MOG' 2D"! 8B ' M>G' 4" 9 4 +88' 2 3' 3 4C .+ 5+' M<G' 44 +88' + +!D2 " ' M$#G' +2AC +88' 1 8 442 B 6' M$$G' +-+5 " ' .! + ' M$QG' 2B 4 2! 6' !"4 58"B+ +88' M$;G' 9+' 927 ' " ' !" 6' M$=G' 5" 8 2 56' M$PG' 8C 5+1 7 4 6' -+24" 86' M$&G' R 24 6' 2 3' C "!B 6' " ' B+ 9"3' @ 9' 244' 9+' 1 1 48' @ 9" ' 2A .' "' 5" 8 3+!2 " ' 9+' 3 +!+ 5+' ' 2.+' 592!25 +!' 2 3' +3 52 " ' M$OG' "88' " ' B+' M$>G' !+8 B1 "

" ' (')% "' ? ' M$G' 8 "B' 2A+8' 9+' B 334+' 5" !8+' 7+ @++ ' 8 5 ' 2 3' @ 44 ' @9 59' 42 +!' 8' 2' !++' 2 3' 81" 2 +" 8' 25 D 6 ' MQG' 9+' 59 + ' +44+5 24' 927 8' @9 59' 9+' +259+!' 89" 43' 8 B 42 +' 9+' 1 1 48' "' 25R !+' 2!+' 2 + " ' 2 3' !+ 4+5 " ' M;G' 9+' +44 C .+ 5+' 89" 43' 7+' +J+!5 8+3' ' 9+' 6" .+8 ' 1 1 48' !"B' 9+' !8 ' 4+88" 8' @9 59' 9+6' !+5+ D+' M=G' 9+' 23D2 5+3' 1 1 48' 89" 43' 7+' 255 8 "B+3' "' D+ ' 9+ !"@ ' 142 8' " ' 4 +!2!6' 5"B1"8 " MPG' 9+' +259+!' " .9 ' "' 2 259' B 59' B1"!C 2 5+' "' "!B24' +3 52 " ' M&G' 9+' 42@8' " ' +3 52 " ' 89" 43' 7+' D+!824' +J1+3 + ' 1!"C .!+88 D+' 2 3' B"!24' D+!824' " '* +J + 3 .' "' 244' 9+' 25 4 +8' "' 244' 1+! "38' " ' 4 +' "' 244' 54288+8' " ' 8"5 + 6' "' 7" 9' 8+J+8' MOG' 3 52C " ' 89" 43' 7+' !2 " 24' M>G' 8 ! 5 " ' 8' " ' 9+' 24' "7-+5 ' "' 7+' 2 2 +3' 9+' "7-+5 ' 8' 9+' 25R 8 " ' 2 3' 1!25 5+' " 'D ! +' M<G' 3 C 52 " ' 89" 43' 7+' 2 " 24' "!24' 42@' 3"+8' " ' 592 .+' 3+!' 9+' D2!;! .' 5" 3 " 8' " ' B+ 2 3' 1425+' ' 244' 5" ! +8' 2 3' 3+!' 9+' B "8 ' 592 . .' 54 B2 +8' ' 1!+8+!D+8' 9+' 82B+' 592!25 +! 8 58' ' 8' 1+!+B1 "!6' D2! 274+' "!B ' 2 3' 24@268' 1!25 524' 1 48' 89" 43' 7+' 7!" .9 ' 1' ' 255"!32 5+' @ 9' 9+' 5 8 "B8' 2 3' 81 ! ' " ' 9+' 5" !6' ' @9 59' 9+6' 4 D+ 55+88' " ' 9+' !3+!' ? ' 9+' D2! +3' 6+ ' "!B ' 592!25 +!' " ' +' 42' 244+L8' +3 52 " 24' B+ 9"38' 2 3' 9+' 8 +236' 1!".!+88' " ' 9+' 859""48' 9+' " 3+3' ' 9+' 25+' " ' 9+' 8'D+!+8 ' ! 248' .2 +3' "!' 9 8' 8 +' 8 78 2 24' 2 3' 2 ' 9+' 92 38' " ' 9+' 5 D 4' 2 3' +554+8 28 524' 2 9"! +8' ' !2 5+' 8"' 92 ' 2 ' 9+' " 7!+2A' " ' 9+' +D"4 C " ' ' $0><' 9+' 8 +' @28' 4" ! 89 .' 2 3' 8' 859""48' 7"!+' 9+' !+1 2 " ' "!' + 5 + ' @"!A' ' 9+' +43' " ' 1"1 42!' +3 52 " ' ' 92 ' 1+! "3' 248"' 9+' 8 B 4 2 +" 8' D+!+8' 9+3' #:" "' ' +259 .' 923' 24!+236' 7++ ' 8"' 1+! +5 46' 3+C D+4"1+3' 92 ' 9+' 8 1+! "! 6' " ' 9+' 9! 8 2 ' 59""48' @28' R +8 " +3' +J 7""A8 ' 5"D+!C .' 2 ' 9+' 8 7-+5 8' 2 .9 ' ' 9+' +4+B+ 2!6' 2 3' 8+5" 32!6' .!23+8' " ' +3 52 " ' 923' 7++ ' 1 74 89+3' ' 255"!32 5+' @ 9' 9+' 1!".!+88 D+' 81 ! ' " ' +' 42' 244+' !" 9+!' .2 9" ' 8 J 9' 1+! "!' + +!24' M$000E$0<0G' 923' @! + ' 9+' 0 ! ') ' (' ' 7 ' 1' 2' B2 24' " ' . 32 5+' "!' B12! .' 9+' B"!24' +44+5 24' 2 3' !+4 . " 8' 8 ! 5 " ' " 4 +3' 76' 9+' " 3+!

8 "!6 ' ? ' 52 +!+3' 2 ' 9+' +D"4 " ' ' $0<$' 9+' 8 !D D .' B+B7+!8' " ' 9+' 8 C +' !+8 B+3' 9+ !' @"!A' ' 6" 8' 2! 8 ' 9+ B8 ' 2 3' " 9+!' 5 +8 ' $>#P' 21"4+" ' ' $>#>' .2D+/ 2 ' B1+! 24' 3+5!++' !++8 274 89 .' 9+' 4+.24' 8 2 8' " ' 9+' 8 +' ' !2 5+' !"B' 92 ' 1+! "3' 8' 32 +3' 9+' 5" 8 2 ' 3+C D+4"1B+ ' " ' 9+' 9! 8 2 ' 59""48' ' !+81+5 ' "' 9+ !' +J +! 24' "!.2 !2 " ' 2 3' 9+' 81!+23' " ' 9+' !" 9+!8' "' " 9+!' 5" ! +8 ' 9+' 859+B+' " ' 8 ! 5 " ' !+B2 +3' 9+' 82B+' 28' 9+!+ " "!+' " "' 9+' 9! 8 2 ' +3 52 " ' " ' 6" 9' 9!" .9' 9+' +259 .' " ' 9+' 52 +59 8B' 2 3' 9+' "81+4' B2J B8' "' @9 59' @+!+' 233+3' 5" !8+8' " ' 8 36' .' 9+' 1 1 48' "!' 5"B B+!C 5 24' 3 8 ! 24' / 2 3' 1!" +88 " 24' 1 !8 8' 9+' 9 .9+!' 8+5" 32!6' 1!".!2B' ' 9+' 9! 8 2 ' 59""48' @28' 9+' 4". 524' 8+R + 5+' " ' 9+' 868 +B' 3+D 8+3' 76' +' 42' 244+' / 9 8' @+!+' 3+D+4"1+3' 9+' 8 1+! "!' 5" !8+8' ' 9+' .!+2 ' 7"2!3 .' 5"4C 4+.+8' " ' 2886' M 2! 8G' ' + +' " 4" 8+' 6" 8' "!3+2 J ' 2 3' " 9+!8' @9 59' 1!+12!+3' 8 3+ 8' "!' - +' 1!" +88 " 24' 2 3' +59 524' 5" !8+8' " ' 9+' 5"4+' + !24+' 2 3' 9+' 59""4' " ' +8

! .' 9+' 23B 8 !2 " ' " ' !" 9+!' 9 4 11+' M$>;>E$>0=G' 9+' 8 +' B23+' .!+2 ' 1!".!+88' ' $>;>' 9+' !" 9+!8' "1+ +3' 2' !++' .!2B B2!' 859""4' ' " !+24' 2 232' "B+' 6+2!8' 42 +!' $>=&' 859""48' @+!+' +8 274 89+3' ' 24 B"!+2 3' +@' "!A' 6' 9+ ' !" 9+!' 25 4+' 7+52B+' 9+' (8 "!' " ' "! 9' B+! 52' ' $>=>' 9+!+' @+!+' P&' !" 9+!8' ;Q## 1 1 48' !+1!+8+ .' 9+' 8 !+ . 9' " ' 9+' 8 +' ' 2 232' 2 3' 9+' +3' 2 +8' ' $>0;' 2 ' 9+' 54"8+' " ' !" 9+!' 25 4+L8' 25 D+' 4 +' 9+!+



9+ 8+5" 3 5+ !6 59 4 28 5 +J1+5 2 " 8 7+C 52B+ 4+88 .+ +!24 2 3 @+!+ 5" +3 B"!+ 2 3 B"!+ " B "!+ 8+5 8 2 3 12! +8 2 3 9+ 9 !59 7+.2 " B2A+ 8+4 2 9"B+ 9+ @"!43 D+ 9+ 9+ 9 !59 3 3 " B2A+ 2 6 1!"D 8 " "!+ 8+5 42!+ +3 52 " 24 9" .9 9+ " 46 859""48 2D2 4274+ @+!+ 9"8+ A+1 76 9+2 9+ +259+!8 @9" 8+3 9+2 9+ +J 7""A8 9+!+ @+!+ 9+!+ "!+ " 859""48 " +4+B+ 2!6 8 ! 5 " 5 2446 5" +5 +3 @ 9 9+ 9 !59 "!+ 5+ ! +8 @ 9 9+ +J5+1 " " 9+ B" 28C +!6 859""48 3+!+ 9+ ! 4+ " 28 4 #":" "&1 2 3 " 9+!+ B" 28 +! +8 " 9+ 28 9+ +8 " 46 @ 9 9+ + +3 5 +! 4+ 2 +!+ P##3" 9+6 7+5"B+ 2 2 5"B B" 2 3 9+ " 46 B" 28 +! +8 + 9+!+ 8 9+!+ 2 6 82 8C 25 "!6 +D 3+ 5+ 92 9!8 2 8 2 6 BC 7+!+ 23"1 +3 9+ 1!" +88 " " +259+!+ "!+ 9+ 82A+" 9!8 2 59 43!+ B7+!" 3 C 5 4 +8 8 ""3 9+ @26 " 2 9!8 2 @9" @" 43 23"1 9+ 1!" +88 " 9+ 8 7-+5 8 2 .9 9+ +4+B+ 2!6 859""48 @+!+ " +5+88 6 5" +5 +3 @ 9 12.2 4 +!2 !+ "!+ 9+!+ @28 28 6+ " 9!8 2 4 +!2 !+ @"!96 " 9+ 2B+ 9+ 2.2 9+ 4 + " 9+ +259+!+ +5+882! 46 7!" .9 9 B 5" 25 @ 9 9+2 9+ @"!89 1 2 3 9+ @" 43 "1+ 2 859""4 9+ @28 "74 .+3 " "44"@ 9+2 9+ 5 8 "B8 9+8+ 3 823D2 2.+8 +! 44 2 #1:" "& 8+ 8 "! 9 @ 9 9 8 8 24HD+9+B+ 5+ 9 8 @"!A 9 , M5 +81+5 2446 59 $#G +D+! 9+4+88 8"B+ 3 3 D+ !+ 1" 2 1!" +88 " !+.2!3+3 76 B2 6 28 32 .+!" 8 " 9+ 9!8 2 8 2 9 9 8 ! .+ : "&1 @9+ 9+ @28 4+ 1+ 4+88 76 9+ 5" 852 " " 9+ 1!"1+! 6" 9 8 2 9+! 9+ B2! 6! +" 328 8 11"! +3 9 B8+4 2 3 9 8 B" 9+!+ 76 +259 .!9+ "! 5 2 3 8 1!"7C 274+ 92 9+ 59""4 " 4+J2 3! 2 E:" "&1 @9 59 923 7++ 7!"A+ 1 76 9+ !+.2!8+5 " " +1 B 8 +D+! 8 Q#Q 9 8 "1+ +3 2.2 3+!+ 9+ . 8+ " 2 !9+ "! 524 859""4 @ 9 ! .+ 28 8 +259+! M + B2 + % ') 8 % 1 $&=G 9+ " 9+! 528+8 " !9+ "! 524 +259 .76 9!8 2 8 2!+ D+!6 852 6 2 3 3" 7 4 7+ "!+ 9+ + 3 " 9+ 9 !3 5+ !6 2459 " 8 B+ " +3 76 8+7 8 /" " (Q< QG 28 1! 5 124 " 9+ !++A 859""4 2 C "59 M. G @9" +D+! 9+4+88 @28 2 1!+876 +! " 9+ 9 !59 " 92 5 6 92D .7++ B23+ 8 59 " 255" " 9 8 8 1+! "! 2 9 9!8 B26 7+ 92 " 7+5"B .2 9!8 2 9+ 272 3" +3 +259 .!9+ "! 5 28 2 1!" +88 " 28 @28 9+ 528+ @ 9 61! 2 M. aG " 9 8 5" C D+!8 " @9" 923 "!B+!46 7++ 2 3 8 . 89+3 +259+!" " !9+ "! 5 @+ 5+! 2 46 3 9!8 2 +259+!8 " !9+ "! 5 76 9+ B 334+ " 9+ " ! 9 5+ !6 2 3 9+6 @+!+ 1!"72746 B+!" 8 76 9+ B+" : 4 2 8 +3 5 2.2 8 9!8 2 +259+!8 ;&Q ! .9+ 9+2 9+ B1 !+ 2 3 "! 2 5" 8 3+!274+ B+ 2 +! 9+ 8"4+ !+ . " 8 2 + 9!8 2 8 @+!+ "74 .+3 + 9+! " 92D+ "!8 "! 9+ ! 59 43!+ 2 9"B+"! "8+ 3 9+B " 9+9+2 9+ +259+!8 7" 9 528+8 8 .9+2 9+ 4 +!2 !+ 28 9+ B+2 8 " 8 ! 5 " "! 9+6 923 " +259 9+B 9+B8+4D+8 28 7+8 9+6 5" 43 @28 1!25 5244 B1"88 74+ "! 9!8 2 8 @9"446 "! !+ !2 ! "! B 2 + 32 5+ " 9+ 859""48 D+ 8 59 2 ! ."! 8 28 +! 44 2 923 " 23B 9+ +5+88 6 " 8+5 42!+ +3 52 " 81 + " 9+ "7-+5 " 274+ 4 +!2 !+ 9" .9 9+ 528+ " 9+ 8 3+ 9+!+ @28 4+88 32 .+! " 9+ 2 9 92 528+ " 9+ +259+! " 32 .+! " 7+ . D"4D+3 25 8 92 B .9 7+ !+.2!3+3 28 "!B8 " 3"42 !6 9+ B2 +! " 9 .9+! 8 ! 5 " 9+ 528+ @28 8"B+@92 3 +!+ !"B 92 " +4+B+ 2!6 4 +!2!6 8 ! 5 " D+ 9+!9+ "! 524 859""48 2 .9 B"!+ 92 7+44+8E4+ !+8 9 8 "! 524 2 3 85 + 5 @"!A8 @+!+ !+23 9+ +J 8 " 9+ 42 +! @+!+ 4+88 3+ 25+3 @ 9 B6 9"4". 524 B2 +! 2 3 82425 " 8 B"!24 6 2 3 B .9 82 +46 7+ +B 14"6+3 76 9! 8 2 8 7" 9 28 +259+!+ 2 3 28 8 3+ 8 59 @+!+ 9+ @"!A8 " ! 8 " 4+ 54 3 2 3 24+ 8 3 +3 9+ 9! 8 2 859""48 5" 3 5 +3 76 9+"3" 8 2 "B+ M 2! 54+ " ! + +!& 0+ &" 4 9+ +259+!" 19 4"8"196 ! 9+!B"!+ B .9 +28 46 !+2 9! 8 2 6 28 9+ 8 1!+B+ 19 4"8"196 2 3 1 !8 + B+ 9"38 8 B 42!" 9"8+ "44"@+3 " 9+!+ 19 4"8"19 524 859""48 9 8 @28 244 9+ B"!+ +286 7+52 8+ +44+ 8 5 19 4"8"196 923 + +!+3 1" 8 !+4 . " 8 8 2.+ 2 3 @28 8 3 +3 D+!6 42!.+46 !"B !+4 . " 8 +!+8 8 2 25 2 B7+!" " B+ " 19 4"8"19 524 !2 .7+52 B+ 9! 8 2 8 8"B+ @+!+ 1!" +88 " 24 +259+!8 " 19 4"8"196 " @9"B 9+ B"8 BC 1"! 2 @+!+ ! 8 3+8 : 8 2! 6! 9+ 2.E "!28 2 2+ 8 :" "&1 4+B+ " " 4+J2 3! 2 :" "&1 2 3 1!"72746 +4 " " 2!3 8 9+8+ : 8 2! 6! 2 2+ 8 2 3 4+B+ 2!+ A "@ " 92D+ 7+5"B+ 1!" +88 " 24 +259+!8 " 9!8 2 19 4"8"196 9+ "!B+!5" 3 5 .2 859""4 " 9 8 "@ !+81" 8 7 4 6 9+ @" 42 +! 7+ .5" +5 +3 @ 9 9+ 2 +59+ 524 59""4 " 4+J2 3! 2 M ++ 2! 54+ " ! + +!& 0+ &" 4 9+ 528+ " : 8 2! 6! 8 " 3" 7 61 524 " "9+!8 " 4+88 3 8 5 " +! !+2 +3 9! 8 2 6 28 2 19 4"8"196 2 3 5" C +3 " @+2! 9 8 19 4"8"19+!L8 54"2A 2 3 82@ " 9 . " 1!+D+ 9 8 1!25 5+ " 9 8 1!" +8C 8 " 28 2 +259+!" 19 4"8"196 +@28 "@ 2 239+!+ " 9+ 859""4 " 9!8 2 3 " " 9+ 9+2 9+ 19 4"8"19+!8 9+ 9+"!+ 524 - 8 52 " @28 8 B14+F @92 9+ 3 D + 923 !+D+24+3 12! " "5!2 +8 923 7++ 5" BC 14+ +46 !+D+24+3 9! 8 @9" @28 9+ 52 IC 2 " " 92 82B+ 1 "! 3 D + !+28" M : 8 2! 6! " "1 5 $# G 9+ 82B+ 4 + " 9" .9 @28 2A+ 1 6 4+B+ #:" "&1 @9" !+.2!3+3 9+ 2@" 9+ :+@8 2 3 9+ 9 4"8"196 " 9+ !++A8 28 7+ .7" 9 3 D +46 "!32 +3 "!B8 " 1!+12!2 " "! 9!8 " 9+ 2B " " 1! D2 + +259 .2 +! 9+ B+ 9"3 " : 8 2! 6! 5" 43 +D+! 92D+ 7++ 5" 8 3+!274+ 3"+8 " 8++B " 92D+ 2 +5 +3 9+ 4 + " 9+ 9 !59 28 2 @9"4+F .2D+ ! 8+ " 8 2 3 4+ " !25+ 1" 4+. 842 " 9+ B+ @9" .2D+ 9+BC

8+4D+8' "' ' @+!+' +D+!' B+!" 8' 2 ' 9+' B"8 ' 2 3' ' 9+' 5" !8+' " ' 9+' 9 !59!8' 3+D+4"1B+ ' 9+6' @" 43' 92D+' 4+88' 2 3' 4+88/ "11"! 6' "!' !+2 .' 9! 8 2 6' ' 9 8' @26' 9+' 59 + ' 859""48' " ' 9 8' 8"!' 211+2!' "' 92D+' 7++ ' 9"8+' " ' 9+' "8 58' #:" "&!' 2 3' B+ ' @9"' 76' +55+ C ! 5 6' " ' 3"5 ! +' 8+12!2 +3' 9+B8+4D+8' !"B' 9+' B2 ' 7"36' " ' 9+' 9 !59' 8"' 92 ' 9+' 2B+' S'859""4'T' 7+52B+' +2!46'86 " 6B" 8'@ 9' 859 8B' 2 3'9+!+86' M ' 2! 25A' ') ') .) ' ') 1' $<#&'/("4' '11' ;## G' 9"8+' @9"' 3 3' " '24 + 2 +' 9+B8+4D+8' !"B' 9+' B2 ' 7"36' " ' 9+' 9 !59' 5" 43' 52!!6' " ' 9+ !' @"!A' 28' 1! D2 +' +259+!8' " 46' 7+ "!+' 9+' ! 8+' ' 9+' 9 !59' " ' 2' 7"36' " ' 9! 8 2 ' 9+"4".6' " "' 7+ "!+' 9+' +2!46' 12!' " ' 9+' 9 !3' 5+ !6' +!' 92 ' B+' 9+6' @" 43' 92D+' 7++ ' 8 !" .46' 8 81+5 +3' " ' 9+!+86' !"B' 9+' +2!46' 12!' " ' 9+' 9 !3' 5+ !6' ' 81 +' " ' 9+' 2 3+' " ' 4+B+ ' " ' 4+J2 3! 2' 9! 8 2 ' 9" .9' @28' !+.2!3+3' ' B"8' 12! 8' " ' 9+' 9 !59' 28' 8"B+ 9 .' 3 +!+ ' !"B' 2 3' 8 C 1+! "!' " ' 19 4"8"196' 9+' "8 58' @+!+' "" B 59' 5" 5+! +3' @ 9' 19 4"8"19 524' 1!"74+B8' "' B2A+' 9+' 8 36' " ' 19 4"8"196' "!' 9+' !+2 C B+ '" ' 9! 8 2 6'28'19 4"8"196'211+2!'28'2 6C 9 .' " 9+!' 92 ' 8"B+ 9 .' +J !+B+46' 3" 7 C 4' ' " ' 1"8 D+46' 9+!+ 5)' M ' +! 2 ' + ' $ % 1' 5' 0 G' + ' @9"' 923' 7++ ' !2 +3' ' 19 4"8"196' "@' " 3' @"!A' " 9+!' "55 12 " 8' 92 ' 92 ' " ' 2' 1! D2 +' +259+!F 9+' 592! 8B2 5' 3 328A24" ' 923' 4" .' 8 5+' . D+ ' @26' "' "!32 +3' 54+!.6' 28' +259+!8' ' B+ ' " ' 19 4"8"19 524' !2 .' 5" 43' 8 44' 3' 27 C 32 ' "11"! 6' "!' 9+ !' 3 24+5 524' 1"@+!8' ' 9+' +J14 52 " ' 2 3' 3+ + 8+' " ' 3"5 ! +' 9+' 9 !59' @28' 7 43 .' 1' 2' 7"36' " ' 85 + 5+' @9 59' @28' 8+4 ' 2' 8 7-+5 ' " ' 1!" " 3+8 ' 8 36' 2 3' 2' B+2 8' " ' +3 52 " ' ' 9+8+' B+ ' 7+52B+' 54+!.6' 28' " ' 2' +@' 3 3' 9+6' @" 43' +BC 14"6' 24' 9+ !' 24+ 8' ' 9+' @"!A' " ' 1!+259 .' @9 59' ' 9+' 28 ' 2 ' 4+28 ' 7+52B+' 2' D+!824' B+2 8' " ' 1"1 42!' +3 52 " ' ' !+4 ." ' 2 3' + 9 58' 1+5 42 D+' - 9 4"8"196' 2 3' B+ 2C 1968 58' 3+!' 8 59' 5 !5 B8 2 5+8' @" 43' 7+' + !+46' 7+8 3+' 9+' B2!A' 3' 28' 2' B2 +!' " ' 25 ' "' 9! 8 2 ' 2A+8' 2 6' 1!"B + ' 1425+' 28' 2' 19 4"8"19+!' 9" .9' " ' 2' +@' @+!+' 9"!" .946' 5" D+!82 ' @ 9' 9+' 1!+D2 4 .' 859""48' 2 3' +B 14"6+3' 9+' 5 !!+ ' 5" 5+1 " 8' ' 9+ !' 9+"4". 524' 85 + 5+

92' 9+' 9 !59' @28' 274+' "' 3"' 3 !+5 46' 2 3' 5" +88+346' "!' +3 52 " ' ' 9+' !8' 5+ C ! +8' @28' " ' ' 9+' "!B' " ' 4 +!2!6' 8 ! 5C " '7 ' '@92' @28' B"!+' '92!B" 6'@ 9' 8' B 88 " ' ' 9+' 52 +59 B+ 24' 8 ! 5 " ' M ++' ! + * ')!&'0+ &"4' E 3' '!+.2!3+3' ' 28' 8' 3 6' "' B1!+88' 1" ' 9+' B 38' " ' 12!+ 8' 9+' +5+88 6' " ' 9+' B"!24' 8 ! 5 " ' 2 3' !2 .' " ' 9+ !' 59 43!+ ' 2 3' 9+' "74 .2C " ' " ' 12!+ 8' "' 8+!+' 92 ' 9+ !' 59 43!+ ' @+!+' 2 .9' !+4 ." ' 2 3' B"!248' ' 9+' B2 +!' " ' 52 +59 B+ 24' 8 ! 5 " ' 9+' !2 .' 2 3' 3 8C 5 14 +' ' B"!24 6' 2 3' 9+' 25 24' 8 ! 5 " ' ' 9+' 3"5 ! +8' " ' 9+' 2 9' @+!+' . D+ ' "' 52 C

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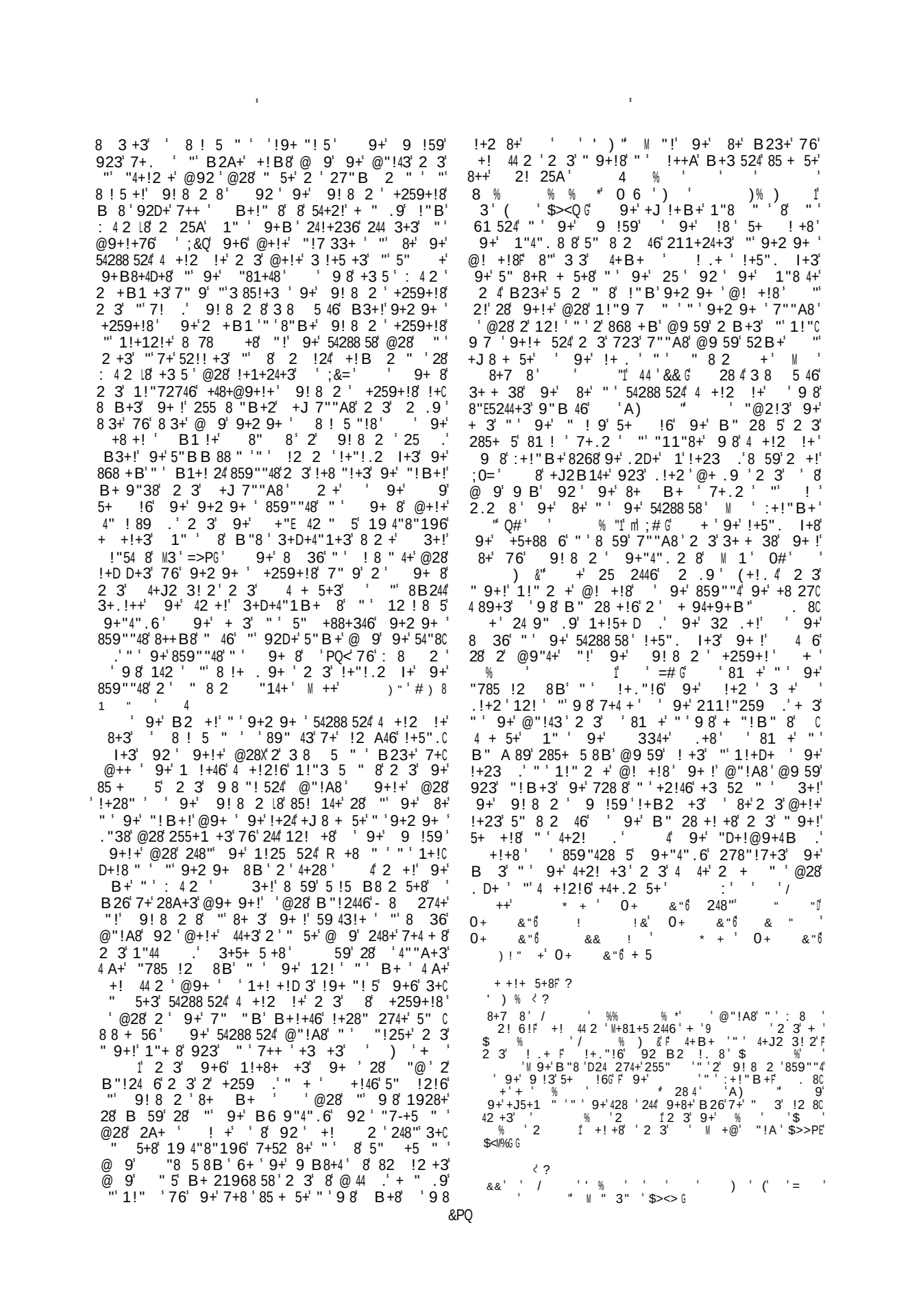

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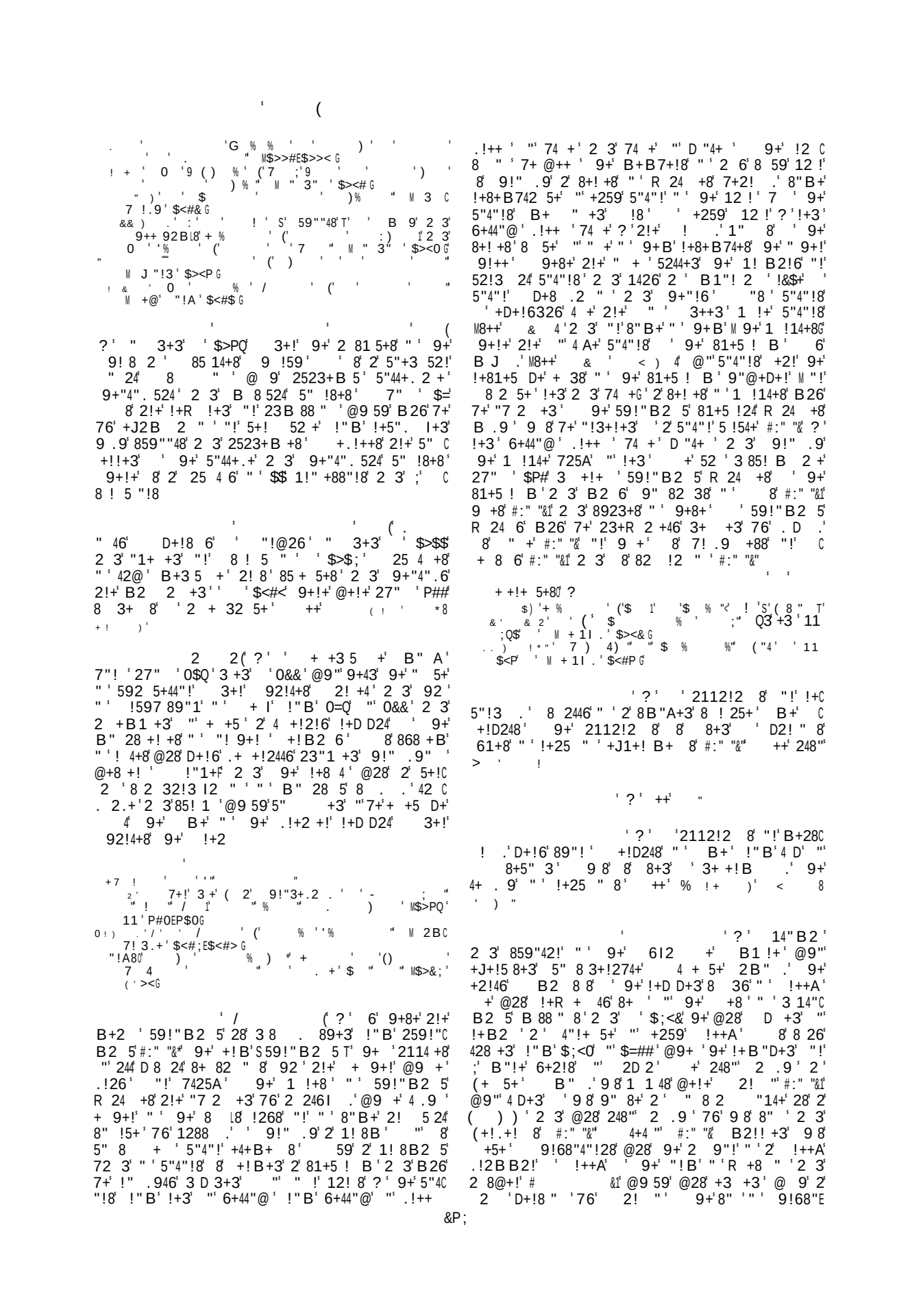

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